MODERN PACKAGING

TECHNOLOGY DEPT.

NOV 27 1945
DETROIT

November 1945

Resist THE ELEMENTS

Rely on National . . . with its long practiced, specialized skill . . . to provide a bond of high wet strength

With the thought in mind that you can't choose the weather — but you can choose the adhesive — let's take a look at the short but very complex life of an ordinary single-ply Kraft shopping bag: A sudden shower may drench it; an unexpected meeting with a wet surface may soak it; close contact with wet vegetables, frozen food and sweating bottles may saturate it. In each case the bond will fail almost immediately unless it is formed with a high wet strength adhesive.

Make a comparative submersion test against an ordinary bond. There's a sales point here that may surprise you!

Now, let's look at the more complex problem of shipping calcium chloride. Packaged at 205°F. it is so hygroscopic that moisture cakes it . . . so deliquescent that excessive moisture sends it into solution . . . yet it must be delivered dry and free flowing. A 5-ply multiwall bag solved the problem: Three plies of specification Kraft paper; two special moisture-resistant plies — all bonded with high wet strength adhesives.

Wet strength adhesives offer a solution to packaging, converting, assembling problems involving resistance to water, moisture-vapor, oil, steam, grease, lactic acid, etc. Submit your specific problem to National . . . now!

Offices: 270 Madison Avenue, New York 16; 3641 So. Washtenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto and Montreal. In England: National Adhesives Ltd., Slough, Bucks.

National ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY TYPE OF ADHESION

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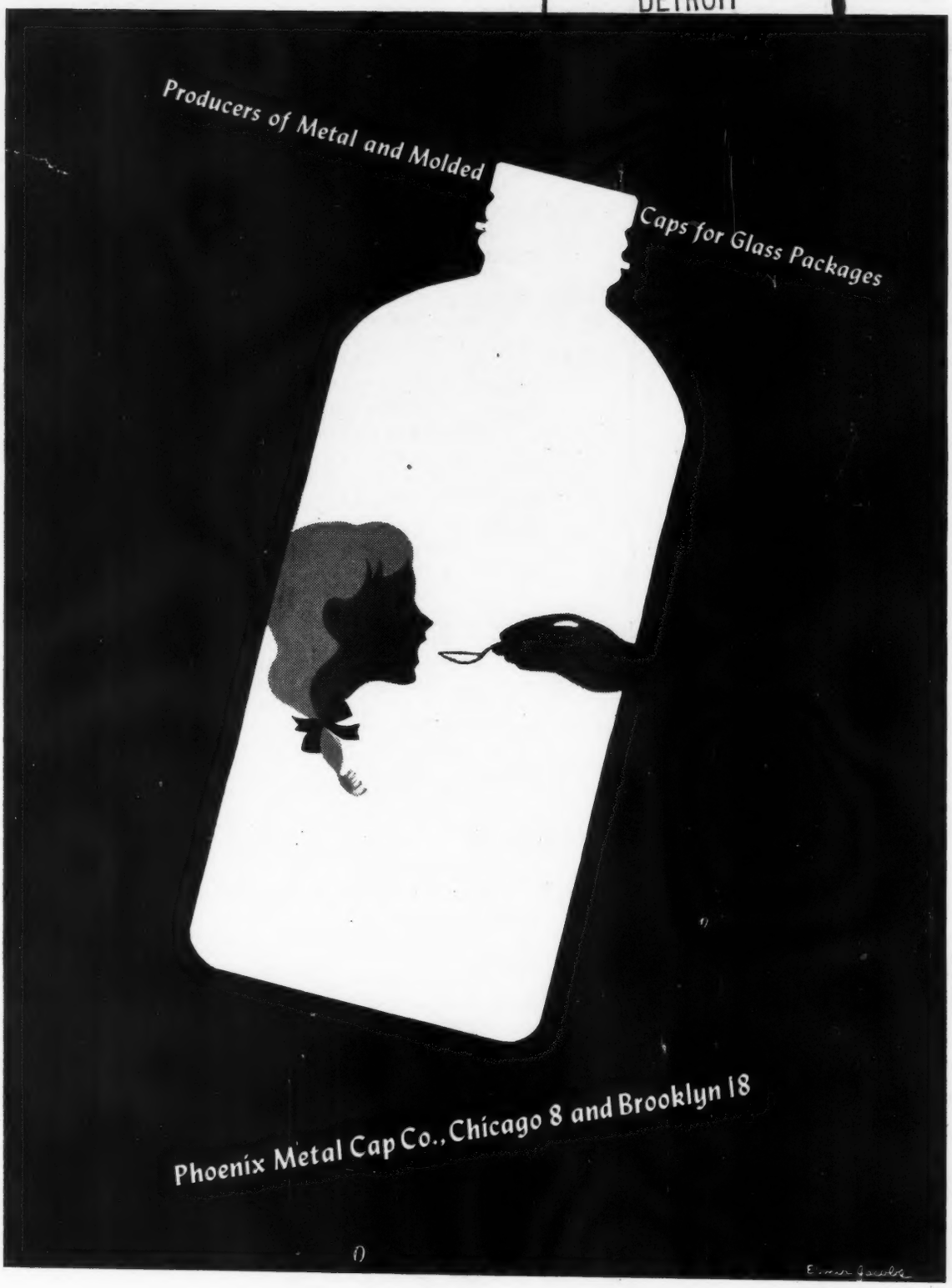

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MODERN PACKAGING

VOLUME 19 — NOVEMBER 1945 — NUMBER 3

★ ★ ★

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COVER—Sheltered in its fortress of paper, metal, wood or plastic, the content of every modern package is scientifically protected from those Four Horsemen of the elements—Light, Heat, Cold, Moisture. To picture this protection for this month's cover, Peter Piening uses symbols of the sun, a snowflake, a raindrop.

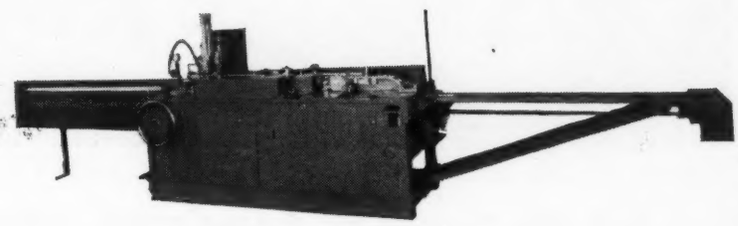
1. Skip Carton
STOPPER

2. Empty Carton
DETECTOR

DOUBLE *Packaging* SAFEGUARDS

for

PARKE, DAVIS QUALITY



Physicians, pharmacists and laymen alike hold in high esteem the name Parke, Davis on pharmaceutical products. Contributing to this reputation is the *care taken* even in the *smallest* details of packaging.

Cartoned ampoules are an excellent example.

An empty carton in a physician's medicine cabinet or bag *could result* in a serious situation.

So Parke, Davis & Company worked closely with Redington engineers (*as they have since 1915*) to provide a *double safeguard* on the equipment that cartons four ampoule sizes... the $^1/_2$ cc and 1 cc in one size carton—the $1^1/_2$ cc and 2 cc in a larger carton. *First* safeguard is an ingenious skip carton mechanism that prevents feeding of carton when no ampoule is in position for inserting. *Second* safeguard: should the empty carton feed through, another mechanism detects it and punches a hole through it. *No empty cartons can be produced.*

The whole cartoning operation is simple, sure, speedy.

Ampoules are placed in pockets of intake conveyer... cartons are stacked in a magazine...machine feeds cartons, expands it, inserts ampoule, and closes carton by gluing outer end flaps...*all at a speed of 175 cartons a minute.*

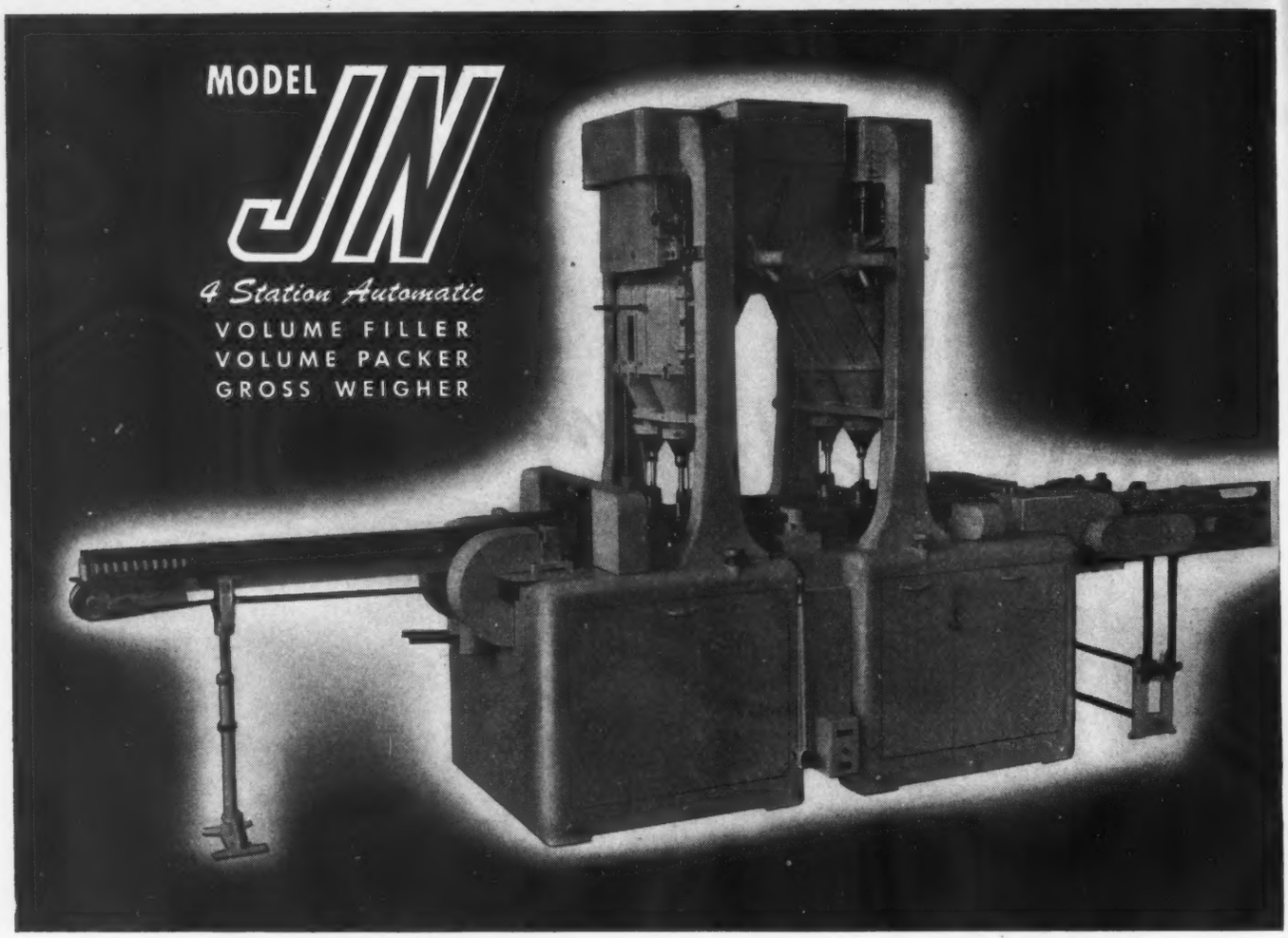
This unique Redington "know-how" is ready to go to work on *your* special packaging plans. Write us—today.

F. B. REDINGTON CO. (Est. 1897) 110-112 So. Sangamon St., Chicago 7, Ill.

REDINGTON

PACKAGING MACHINES

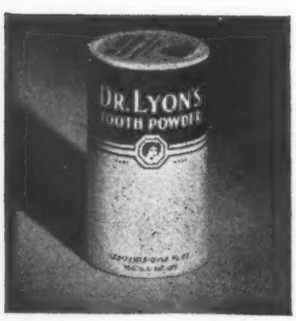
FOR CARTONING • WRAPPING • SPECIAL PACKAGING



...for all types of powdered, granular and paste materials

The new Model JN is unique in that it will pack, or pack and weigh, automatically. It can be adjusted for controlled pressure—the machine can be adapted easily to suit the size and type of container required, and the material handled.

The many new automatic features, plus the speed and accuracy of the JN, soon pay for the machine through savings on labor costs alone. It will pay to get full details and specifications—there are many features never available before—write today!



Filled and packed on the Model JN at a speed of 120 per minute, with an accuracy within 1/6 ounce.

Send U.S. details on any of your packaging problems—we have the machines and the engineering background to help solve them.

US *Automatic Box Machinery Co. Inc.*

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUSH EQUIPMENT & SUPPLY CO.)

Cases developed and manufactured by Hood Rubber Co.

..suggest broad general uses for Geon

Possibilities include luggage, cameras, footwear, packaging and upholstery materials, and many others

DUE to several particularly nasty kinds of mildew, leather cases for binocular and other delicate optical instruments literally fell apart after a few days in the South Pacific early in the war. Then corrosive salt air or the humid air of the jungle got to the instruments and quickly ruined them.

That was soon corrected, however, thanks to the kind of cases you see in the picture. They are made from GEON polyvinyl materials combined with a reinforced plastic core. Mildew—even the meanest kind—has no harmful effect. Salt air or steaming jungle temperatures leave the GEON unchanged. The cases are waterproof and wearproof. They last indefinitely.

Just these few properties of GEON suggest many interesting and important applications. Scuff-resistant, good-looking, practically indestructible luggage and brief cases; upholstery material that can be left outdoors because it is highly resistant to weathering; water and mildew proof fabric coatings for rainwear, shower curtains, tents; soles and heels that will outwear leather many times; film, sheet or coatings of GEON for packages that will resist wear, aging, chemicals, foods, tobacco, oils and greases, moisture, heat and cold. All products made from GEON may be brilliantly or delicately colored.

There will be applications for GEON in every industry in America. For more complete information write Department LL-11, B.F.Goodrich Chemical Company, 324 Rose Building, East 9th and Prospect, Cleveland 15, Ohio.

Geon
Polyvinyl Materials

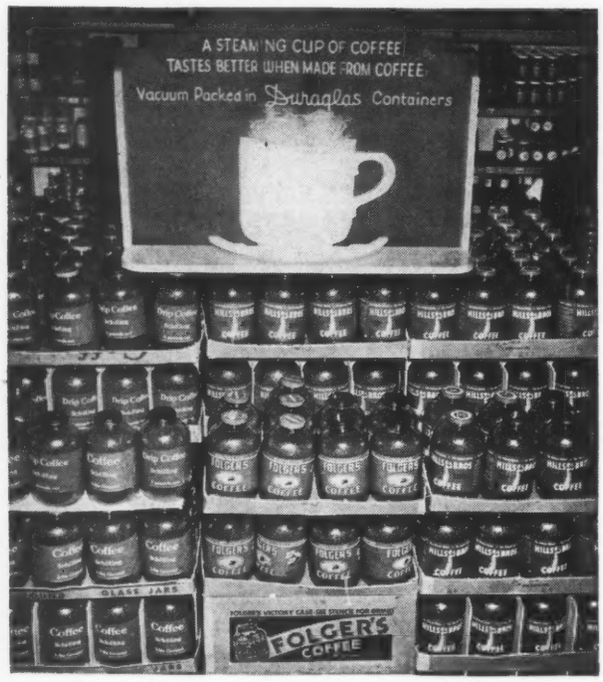
B. F. Goodrich Chemical Company

A DIVISION OF THE B. F. GOODRICH COMPANY

PROFIT FROM THESE 3 WAY LIFTS FOR THE LONG PULL AHEAD

LIFTS TO PRODUCTION

This Flowwheel is a traffic cop on a gravity drop! That's what the starwheel in the picture above became when mounted vertically as shown. It is driven from the filler and indexes one jar for each jar that enters the filler. We make no packing or conveying machinery. But often from our broad experience, we are able to suggest simple improvements that speed up operations for Duraglas container customers.



LIFTS TO DISTRIBUTION

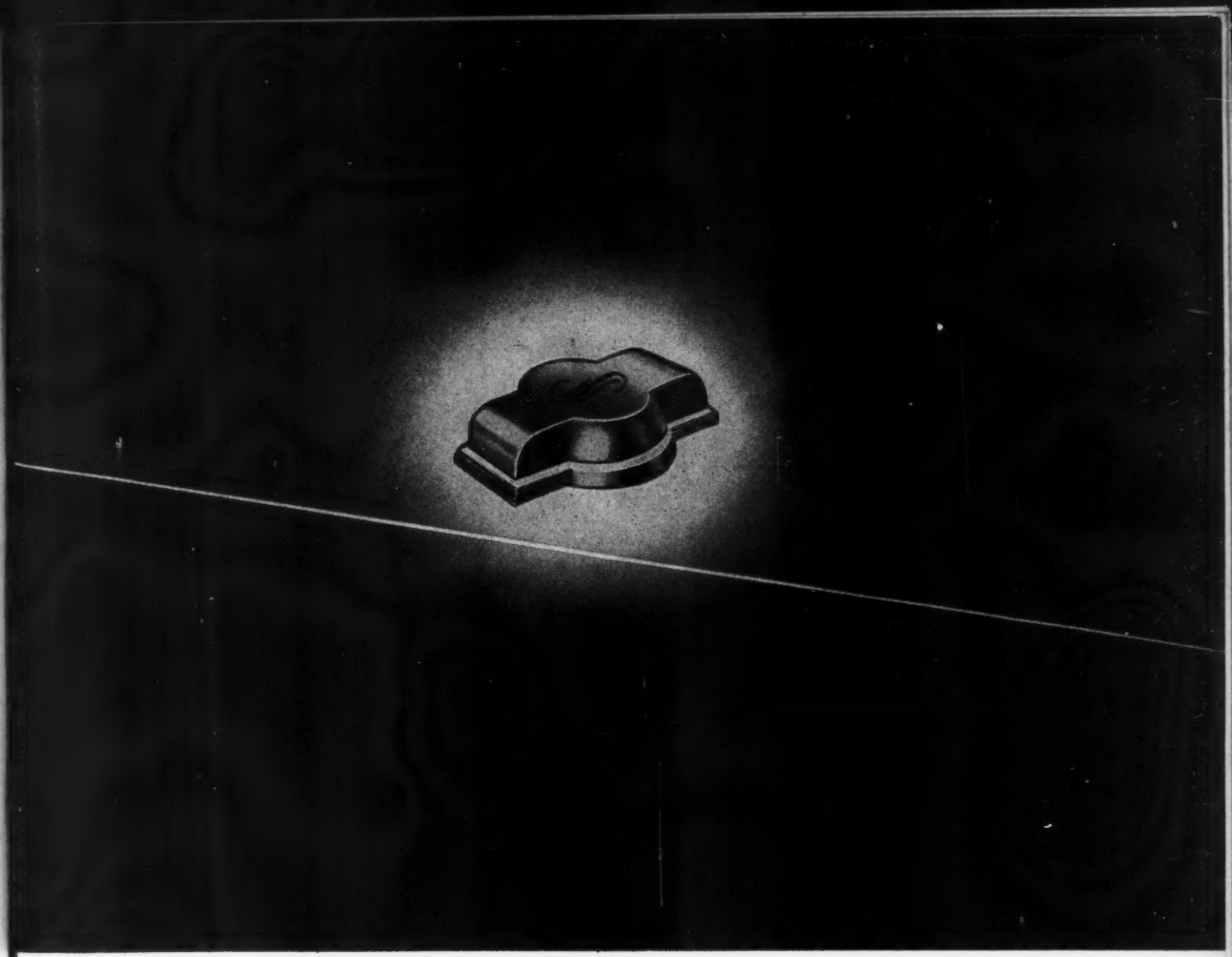
Displays in Duraglas Containers turn buying impulses into impulse purchasers. A huge, steaming cup of coffee—a mass display of vacuum-packed coffee in glass containers at the Grand Central Market at 2435 California Street, San Francisco, California and—market officials report an increase of 52% in coffee sales.

LIFTS TO CONSUMPTION

House-to-House, Door-to-Door, marches a steady procession of messages about Duraglas Containers—messages steadily increasing preference for products packed in glass. Duraglas container advertisements in full color appear in the Saturday Evening Post, Collier's, Good Housekeeping, Parents' and Sunset Magazines—all creating buying impulses for products packed in Duraglas Containers.

OWENS-ILLINOIS GLASS COMPANY
TOLEDO 1, OHIO
Branches in All Principal Cities

Duraglas
TRADE MARK REG. U.S. PAT. OFF.
CONTAINERS
Preserve, Protect and SELL BY SIGHT



DOES YOUR PRODUCT GET TOP-BILLING?

Your product—excitingly boxed—can be the attraction that crowds the aisles! For a well-designed box stars your product—dramatizes it—makes it easier to buy than to by-pass.

Through the years Arrow's creative skill in devising sales-starting boxes has won and held the confidence of leading manufacturers in the jewelry, cosmetic and other fields.

Attractive Arrow box designs are available in a wide range of materials—metal, plastic, wood or cardboard, with coverings of velvet, leather, leatherette, fabric or paper.

Let us help you NOW to plan the boxes that will assure top-billing for YOUR product in EVERY sales theatre.

Arrow is approaching the 2,000,000 mark in the production of boxes which hold the Purple Heart and other medals for the heroes of our Armed Forces. And Arrow is proud that, throughout the war years, it has consistently served this need of the Army and Navy.

Arrow

BOXES AND DISPLAYS

ARROW MANUFACTURING COMPANY, INC., FIFTEENTH AND HUDSON STREETS, HOBOKEN, NEW JERSEY

THE BIGGEST THING IN THE WORLD CAN BE A PIECE OF PAPER

This is it!

The signatures on the victory parchments are dried. History, dipping its quill in hope, writes finis to war.

In the light of such blessings we are asked to "subscribe" to the 8th Victory Loan. Now, all of us know that it is far more than a good investment—more than the final privilege of its kind.

We know that it is our personal expression of reverence for those who fell—it is our respect for the tears of those who mourn them. We know that it is the happy home-coming of millions of gallant fighters. It is freedom from dread headlines, and the blood, sweat and tears of war.

It represents a brighter, safer future for youngsters who greet us when work is done. It is the quiet satisfaction of the war worker who gave his utmost in emergency. It is the inner comforting feeling of a nation whose way of life has been preserved.

Could *any* American go less than the very limit in this 8th Victory Loan, considering all that has been bestowed on us?

We don't think that *anyone* will.

• • •

Included in Oxford's line of quality printing and label papers are: Enamel-coated—*Polar Superfine, Maincfold, White Seal, Rumford Enamel and Rumford Litho CIS;* Uncoated—*Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.*

OXFORD PAPER COMPANY

230 Park Avenue, New York 17, N. Y.

MILLS at Rumford, Maine and West Carrollton, Ohio

WESTERN SALES OFFICE:
35 East Wacker Drive, Chicago 1, Ill.

8TH AND FINAL VICTORY LOAN—OCTOBER 29 TO NOVEMBER 30

Plan NOW for the future with the No. 1 plastic for packaging...

CLOSURES, BOTTLE CAPS, CONTAINERS! Lipsticks, rouge and powder boxes! Wherever you want crystal-clear transparency, the lure of color or smartest styling, BAKELITE polystyrene plastics are unsurpassed in the whole field of packaging. But that's only part of the story. The initial cost of BAKELITE polystyrene is low. It is usually fabricated by high-speed injection molding, and manufacturing costs are low. Extremely light in weight, polystyrene yields more parts per pound than other plastics – cuts shipping costs to a minimum.

When BAKELITE polystyrene plastics become available for packaging, here are the merchandising features they will offer manufacturers and package designers: crystal clarity or sparkling transparent, translucent, and opaque colors; exceptional dimensional stability; outstanding resistance to water, alkalies, most acids, and other chemicals excepting certain hydrocarbons and ketones.

Write Department 108 for illustrated Booklet G-8, which presents in brief, digest form, helpful data on BAKELITE polystyrene as well as the many other types of plastics marketed by Bakelite Corporation.

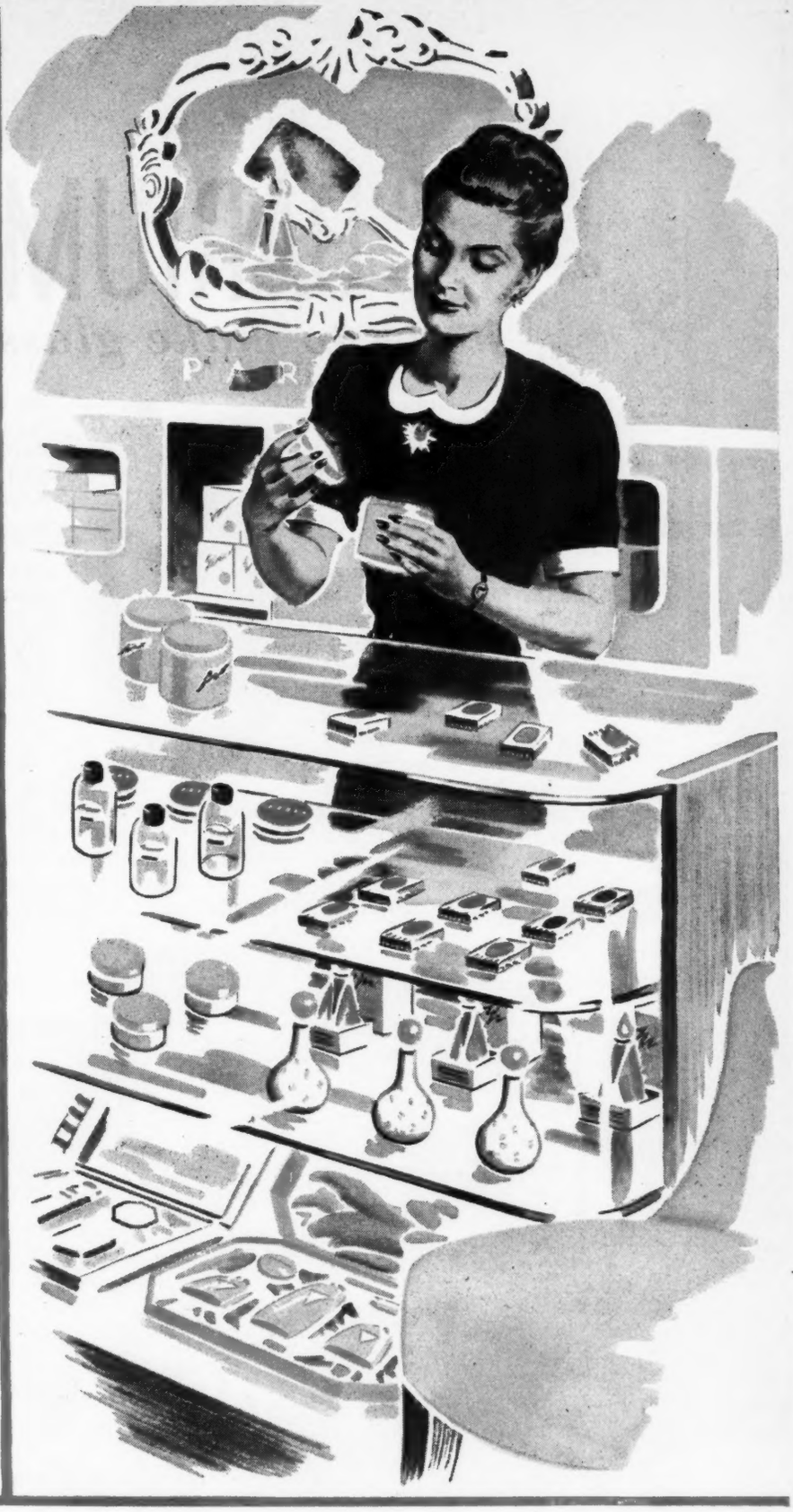
TRADE MARK

BAKELITE CORPORATION

Unit of
Union Carbide and Carbon Corporation

UCC

30 EAST 42ND ST., NEW YORK 17, N.Y.



BAKELITE *Polystyrene*

TRADE-MARK

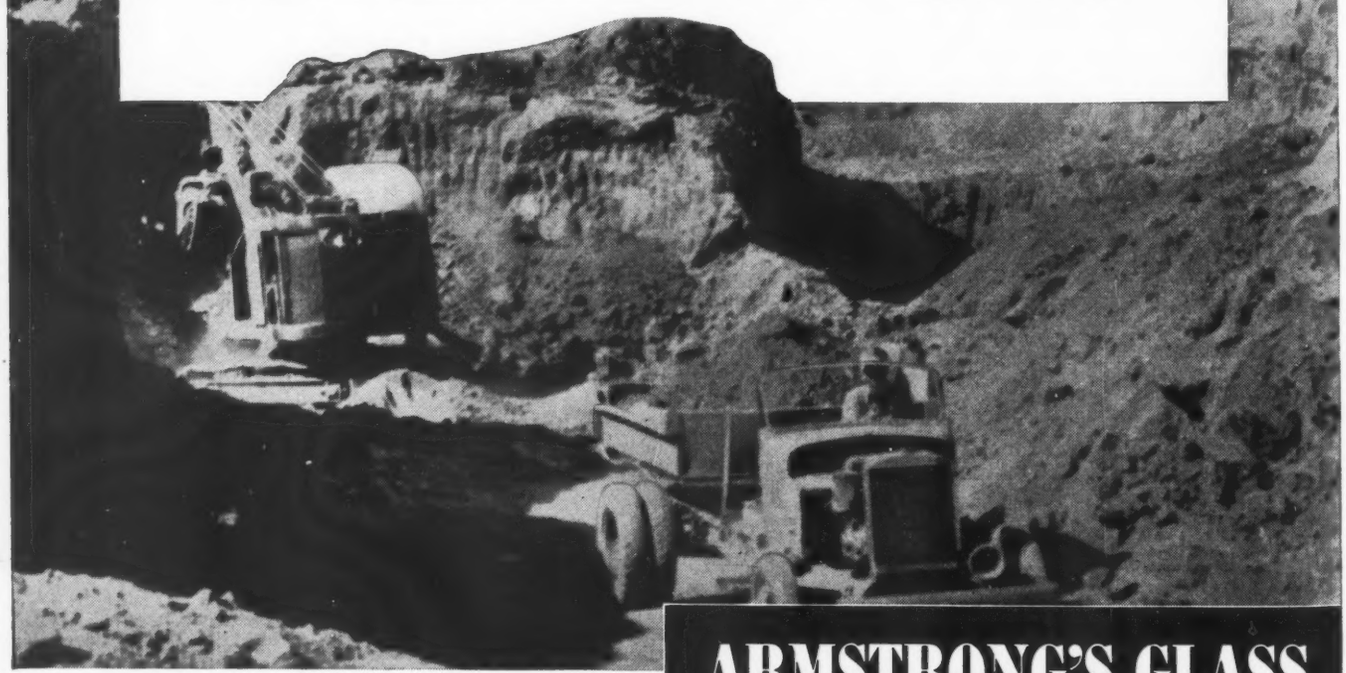
a little BARIUM
helps to make glass brilliant

IN glassmaking, as in cooking, it's the little extras—the dash of this, the pinch of that—which often make the difference between ordinary glass and top-quality ware.

For example, just a small amount of barium in the glass batch can make a big improvement in the quality of the finished container. It increases the brilliance and sparkle of the ware and helps make it tougher. An active aid to melting, it makes possible the use of lower, more economical furnace temperatures and helps remove gases from the melted batch.

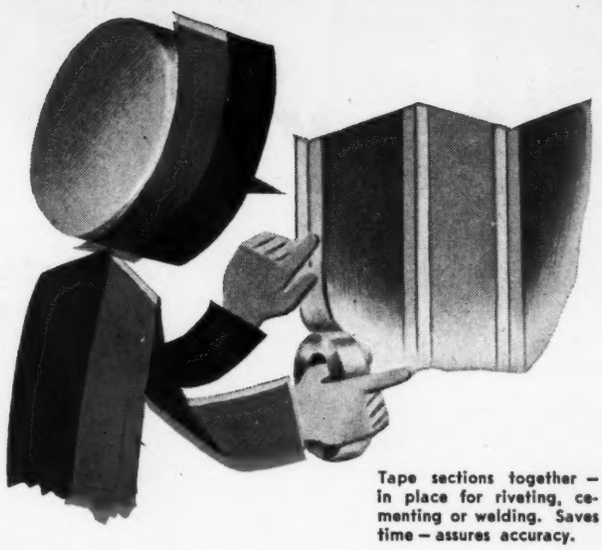
But barium is expensive—and consequently more generally used in making optical glass than container glass. However, through long experience and extensive research, Armstrong's glassmakers have learned how to use barium to improve the quality of Armstrong's glass without increasing the cost of the finished ware. Their success is one of the big reasons why Armstrong's glass enjoys its nation-wide reputation for top quality.

For additional interesting stories about the making of fine glass, send for your free copy of "Men and Glass." Write to Armstrong Cork Co., Glass and Closure Div., 5911 Prince St., Lancaster, Pennsylvania.

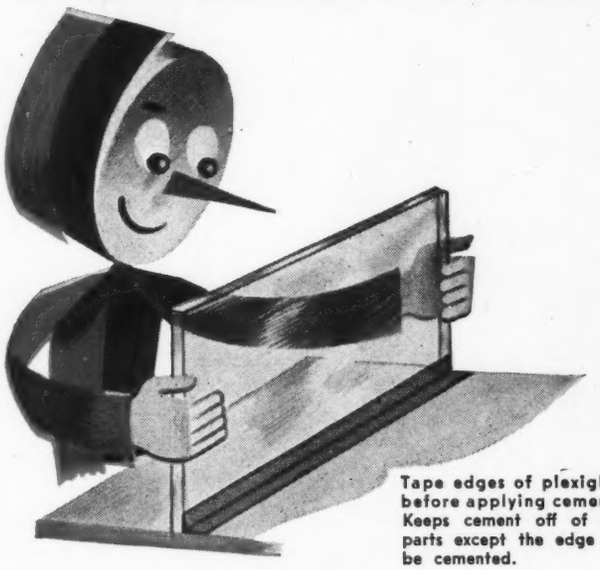


ARMSTRONG'S GLASS
and
ARMSTRONG'S CLOSURES

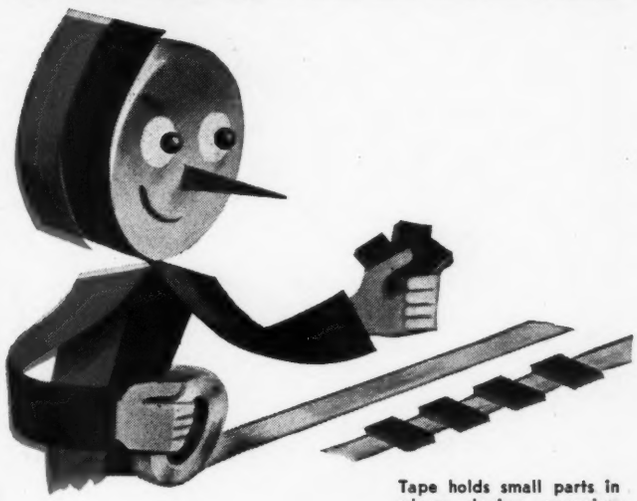
Tape up the ends of pipe—to keep it clean inside—free of moisture and corrosion. Simple, fast, efficient.



Tape sections together — in place for riveting, cementing or welding. Saves time — assures accuracy.



Tape edges of plexiglas before applying cement. Keeps cement off of all parts except the edge to be cemented.



Tape holds small parts in place during spraying operation — permits a better, faster paint job—with fewer rejects.

Jack of all Trades

• Yes, and master of hundreds of important industrial jobs. FILMONIZE Self-Sealing Tapes eliminate bottlenecks, save man-hours and money. FILMONIZE uses are already countless—yet we're called upon constantly to engineer special tapes for specific, out-of-the-ordinary industrial needs. And we'll gladly engineer special tapes for you. Just phone or write us your problem.

• Meantime, learn why so many big industries prefer FILMONIZE. Ask your local distributor to show you the entire line of Transparent, Colored and Multi-Colored Tapes; Printed, Identifying, Packaging and Specialty Tapes; Riveting Tapes; Splicing Tapes; Acetate Fibre and Metal Tapes. Widths of ½" to 18" throughout.

Filmonize

TRADE-MARK REG.

SELF-SEALING TAPES

INTERNATIONAL PLASTIC CORPORATION

Morristown New Jersey

PAY UP HERE!

Poor Mr. Cave Man! In those days, perhaps, he paid tribute on excess loads on his back. He just forgot to unload his bundle after it had outlived its usefulness.

glass container & cap outlet co.

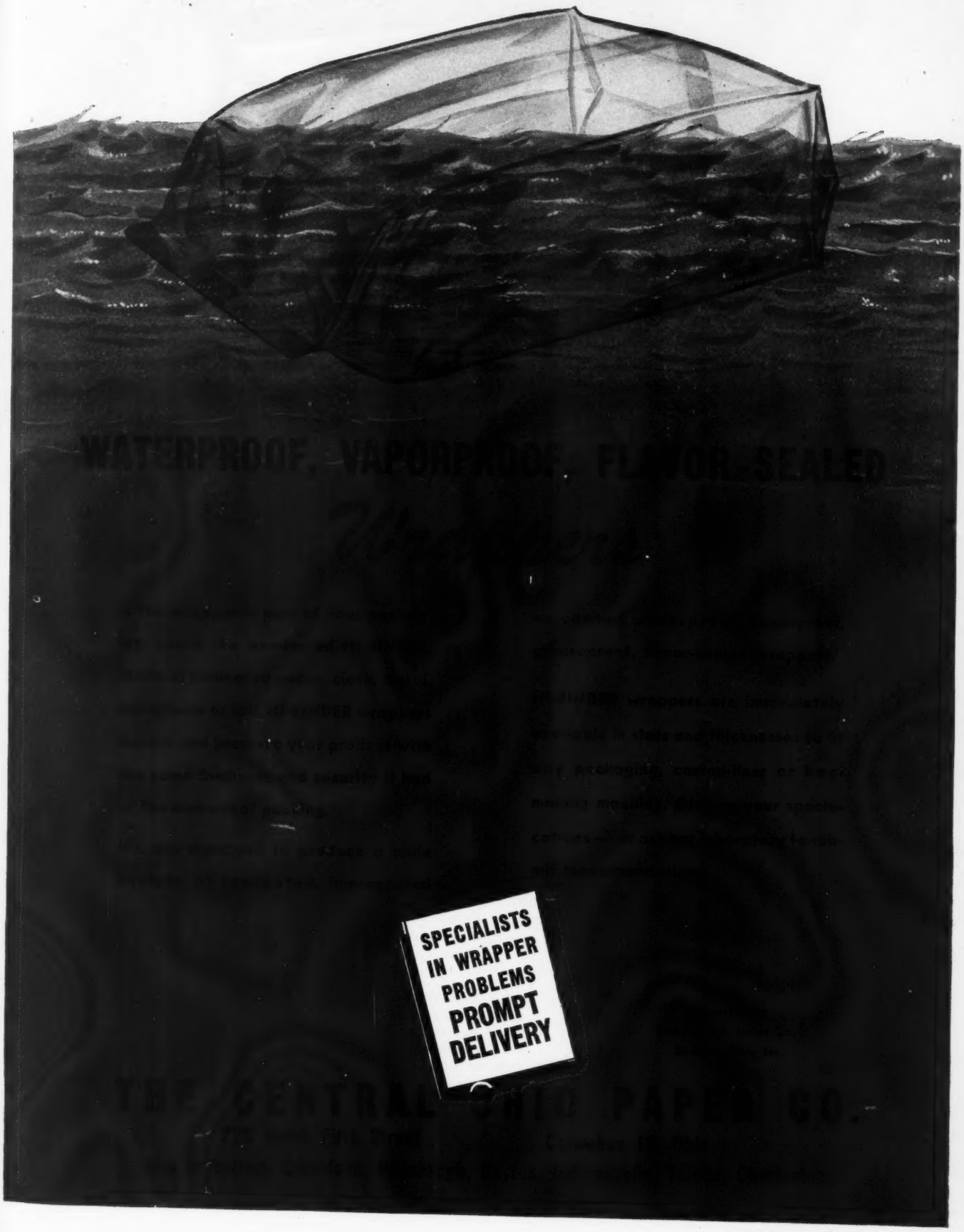
876 Broadway
New York 3, N. Y.

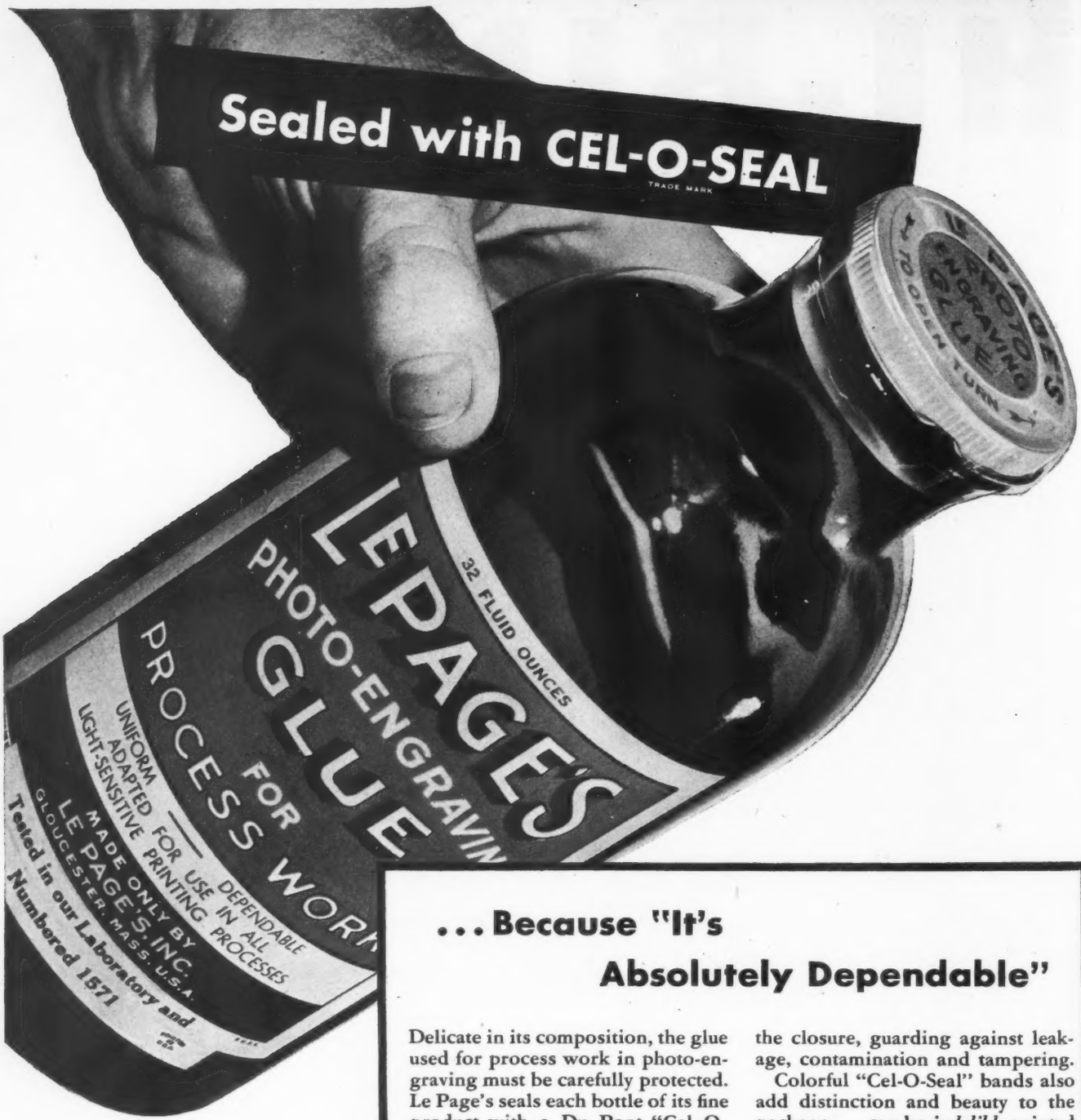
But are WE wiser? Many stock-rooms and EXPENSIVE storing spaces are losing money by tolerating an accumulation of useless containers and caps. *It's time for a profitable change!* Mr. Slowey, of the Glass Container & Cap Outlet Company, says: "Stop paying rent for for that dead collection! Turn the tables—get some useful cash for that useless trash! I'll pay CASH for your containers, glass or otherwise, ANY kind, ANY size, ANY quantity. Same goes for caps!"

Okay? turn that "Liability Pile" into an asset—

CONTACT US TODAY. ***ALgonquin 4-6066***

HI-BINDER


WATERPROOF, VAPORPROOF, FLAVOR-SEALED
SPECIALISTS IN WRAPPER PROBLEMS PROMPT DELIVERY



. . . Because "It's Absolutely Dependable"

Delicate in its composition, the glue used for process work in photo-engraving must be carefully protected. Le Page's seals each bottle of its fine product with a Du Pont "Cel-O-Seal" cellulose band because they "know that 'Cel-O-Seal' is absolutely dependable."

You, too, can depend on "Cel-O-Seal" bands. Easily applied, they shrink to a tight, smooth fit around the closure, guarding against leakage, contamination and tampering.

Colorful "Cel-O-Seal" bands also add distinction and beauty to the package . . . can be *indelibly* printed so that they're attention-getting second labels.

Complete your glass package with this valuable protective and merchandising aid. Write today for full information.

• • •

"Cel-O-Seal" bands and Wind-O-Band* seals are sold by: E. I. du Pont de Nemours & Co. (Inc.), "Cel-O-Seal" Section, Empire State Bldg., New York City 1 • Armstrong Cork Company, Glass & Closure Division, Lancaster, Pa. • I. F. Schnier Company, 683 Bryant Street, San Francisco 7, Cal.

*Trade Mark

DU PONT "CEL-O-SEAL" BANDS

Buy—and Hold—Victory Bonds

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . *THROUGH CHEMISTRY*

What has *Lynn Merrick** got that ten thousand others *haven't?*

Since Mother Nature has blessed all our womenfolk with the same physical features, it must be *how her features are proportioned* that gives Lynn Merrick that greatest of all box office attractions — *Beauty!*

Package by Ritchie

**Lynn Merrick,* in the Columbia picture, "Voice of the Whistler."

AND SO IT IS with packages. For packages of competing products have much the same features. It is the *uncommonly skillful proportioning* of common package features that gives a Package by Ritchie *beauty!* That makes it a *stand-out*—a package people see, ask about, reach for—a package that *sells!*

WAY TO A BETTER PACKAGE

The Ritchie way integrates art and artisanship—to give you a better package at a low unit cost. A package that quickly, unmistakably identifies, fully protects and conveniently dispenses your product. A practical, production-planned package—easy to fill or pack, easy to handle, to stack and display—but *above all* designed for eye-appeal, for quality-impression, for *beauty that sells!*

THE 5 ESSENTIALS OF A SELLING PACKAGE

1 It must be practical, production-planned, economical to manufacture, easy to fill or pack.

2 It must fully protect and conveniently dispense the product.

3 It must be easy to handle, stack, display.

4 It must *proclaim* the quality and identity of your product.

5 It must be good looking, memorable, ATTRACTIVE!

W. C. *Ritchie and* COMPANY

8850 Baltimore Avenue • Chicago 17

SET-UP PAPER BOXES • FIBRE CANS • TRANSPARENT PACKAGES

NEW YORK DETROIT LOS ANGELES ST. LOUIS MINNEAPOLIS

THE EYE GUIDES THE HAND

● If the shopper's eye lights up at sight of your package, the next sound you'll usually hear is the ring of the cash register.

But you have to stop her first. Use the eye-catching luster and brilliance of film or foil when processed by Dobeckmun. Take the basic protective qualities of these materials. Mix our attractive designs with your good self-selling instructions and you have the winning combination.

We'd like to help direct shoppers' eyes and hands to your products. Creative suggestions and technical advice are available now, with deliveries dependent upon military priorities. *The Dobeckmun Company, Cleveland 1, Ohio. Branches at Boston, Chicago, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.*

DOBECKMUN

CLEVELAND PLANT

SELF-SELLING PACKAGES IN PROCESSED FILMS AND FOILS

KIDDER POINTERS

No. 10. Observations of trends and indications in packaging . . . noted by the manufacturers of Kidder "3 Point" Presses, Kidder Press Company, Inc., Dover, N. H.

There's an illustrated story of vital importance concerning packaging in "Report from the Pacific" by R. L. Van-Boskirk, Washington editor of MODERN PACKAGING in the July '45 issue. It's a "tell-all" story that may interest you.

If you can be better convinced by seeing the product along with the story, don't miss "Aluminum foil on postwar production lines" in MODERN PACKAGING for July '45. You'll find an actual sample of Baker's chocolate wrap, rotogravure printed roll stock, laminated foil and paper and the Sheffield cheese wrap of foil-wax-paper lamination whose sealing surface will seal either to foil surface or to itself when heat is applied. It's a fascinating story even if you're not up against package problems.

Writing under water or at 50,000 feet, on cloth or any kind of paper, is possible with a revolutionary new fountain pen by Eversharp and Eberhard Faber. Its ball-bearing point is fed instantly-drying viscous ink from a cartridge holding a year's supply.

Mountain leather, a type of asbestos, is acid-resisting, fireproof and adaptable to industrial uses for filtering, sound-proofing and shock-absorbing. When wet, it resembles paper pulp. A large deposit has been found on Lemesurier Island, Alaska, and U.S. Bureau of Mines has been testing it.

High-speed uniform defrosting of frozen foods is accomplished by dielectric heating . . . adopted by A & P food stores for thawing food in bulk. Tests conducted at Federal Telephone & Radio Corporation showed thawing of frozen cherries in six seconds.

If your markets embrace the Pacific Northwest farm area, you'll be interested in the third survey of brand preferences in a wide variety of commodities in "What's Being Bought in 1945", a survey of 1644 farm households in that area by Pacific Northwest Farm Trio of Spokane, Washington.

"Color in Business" titles a highly readable article on the importance of proper color as a merchandising tool — from PACKAGE LABORATORY NEWS, Vol. 4, No. 3 by Hinde & Dauch Paper Co. of Sandusky, Ohio.

If paper is in your thinking, better read "The Reciprocal Trade Agreement and You" which highlights the results of foreign competition. It's released by the American Paper and Pulp Association in PAPER INDUSTRY AND PAPER WORLD for July '45.

D. Clark Everest, president, Marathon Corporation, presented "Review and Preview of the Paper Industry" before the Chicago Professional Paper Group in June '45. It appears in PAPER INDUSTRY AND PAPER WORLD for July '45.

A story on "The Drying of Ink", condensed from Bulletin 13, Lithographic Technical Foundation, appears in PAPER INDUSTRY AND PAPER WORLD for July '45.

Apparently there's a packaging opportunity waiting someone in the frozen fish field, since mackerel especially changes color in cabinets even at 42°F. and is returned to the dealer even though edible. Specially coated moisture-proof cellophane helps with the problem following immediate quick-freezing. (Field Report 5 on Packaging Materials from FOOD INDUSTRIES.)

KIDDER PRESS COMPANY, INC., ***Printing Machinery,*** **Dover, N. H.**

WRAPPER ACHIEVEMENT OF THE MONTH

Impulse-buying is stimulated with this BARONET Cheese wrapper which is printed by one of Traver Corporation's Kidder Presses on No. 300 P.C. red cellophane. The job is processed in blue, white and gold with underlay inks. These inks, made by Traver to match the customer's color specifications, have a natural richness and sparkle which add to the effectiveness of the crisp colorful cellophane wrapper. BARONET is a French type, semi-soft pasteurized milk natural cheese, made in U. S. A. by C. E. Zuercher & Co., Chicago . . . manufacturers and importers. The five-pound loaf shown here is divided for convenience into half-pound cutting sections, indicated by arrowed lines on the wrapper. An additional advantage of the cellophane wrapper is that it prevents drying out of the cheese. For this well-designed, practical cheese wrapper, Kidder salutes

TRAVER CORPORATION
358-368 West Ontario Street
Chicago 10, Illinois

LETTERPRESS...ANILINE...GRAVURE!

Find Kidder Press expanding its lines to meet converters' needs

The same "3 Point" trademark which has long identified Kidder Presses now represents three *types* of printing presses for the converter field . . . as well as the three *characteristics* of quality printing shown in the panel. Kidder's long-accepted multi-color letterpresses will have as Kidder-line associates:

Aniline-type presses with the "Aniliner", introduced a few years ago and now perfected into heavier presses for high-quality, high-speed work . . . and now the "Celloprinter", a new, narrow model being introduced to serve the cellophane field primarily.

Gravure presses, to be known as "Unitype" presses, because they are designed for purchase a unit at a time . . . expanding as customer needs increase.

The *Kidder Slitters* and rewinders are to be offered in a number of new models for choice in the converting trade.

Kidder is again building presses for converters . . . Kidder engineers are thinking ahead with packaging and inking problems and will be glad to consult with you.

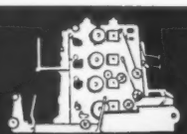
A new Aniliner Bulletin is already available. Write for your copy, Kidder Press Company, Inc., Dover, N. H.

CONTROL OVER THE PAPER
PROPER DISTRIBUTION OF INK
ACCURACY OF THE IMPRESSION

KIDDER

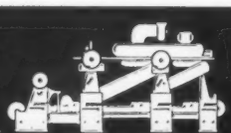
Manufacturer of "3 Point" Presses—so-called because they fulfill the three major requirements for perfect printing.

KIDDER
THREE POINT
PRESS



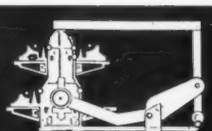
MULTI-COLOR LETTER PRESSES

for waxed paper, box wrappers, etc., rewound or sheet-delivered — up to 72 inches.



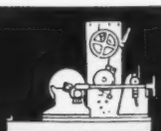
MULTI-COLOR "UNITYPE" GRAVURE PRESSES

for cellophane, foil, pliofilm, etc., — up to 36 inches.



"ANILINER" and "CELLOPRINTER" MULTI-COLOR PRESSES

for decorative papers, cellophane, glassine, etc., — up to 65 inches.



SLITTERS AND REWINDERS

for paper mills, finishing rooms, and small-roll, high-speed slitting — up to 115 inches.

picture of a hot day . . .

You've probably sweltered through days when the thermometer pushed up through the 90's. Imagine three whole months . . . 90 nights and days . . . when it registers between 100 and 105 degrees. You'd break down. So do some collapsible tubes.

But not until it has actually weathered 3 months of tropic heat in a controlled temperature cabinet is an Alcoa Aluminum Tube recommended for a product for which it is being tested. Alcoa wants to be certain that, under the most adverse conditions of actual use, the tube will have no bad effect upon your product . . . or vice versa.

For products which *do* attack plain aluminum tubes, a number of interior coatings have been developed by Alcoa that effectively offset such reactions. Alcoa coated tubes get the 90-day minimum test, too, before being recommended.

Let the Alcoa Packaging Laboratory test *your* product to see what type of Alcoa Aluminum Tubes you can use safely. Their strength, lightness, beauty, and economy are big advantages that you will like. ALUMINUM COMPANY OF AMERICA, 2129 Gulf Bldg., Pittsburgh 19, Pa.

FIRST IN **ALCOA ALUMINUM**

ALCOA A·C·O·A ALUMINUM

Another Standard-Knapp Special!

The photograph shows a complete installation of Standard-Knapp equipment. A number of packing machines deliver their output to a collector line. A half-dozen packing lines are thus geared to one collecting mechanism which delivers packages in any desired position to any given point in the proper order. At the end of the line packages are handled by a bundling machine or one of Standard-Knapp's case packers.

This is another illustration in the series showing special Standard-Knapp packaging equipment. We design and build equipment to meet every type of package production requirement. Standard Knapp equipment, in any automatic operation, is top quality for performance, low unit cost, and minimum maintenance.

Our engineers will gladly consult with you on your production requirements.

STANDARD-KNAPP CORP.

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES

FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

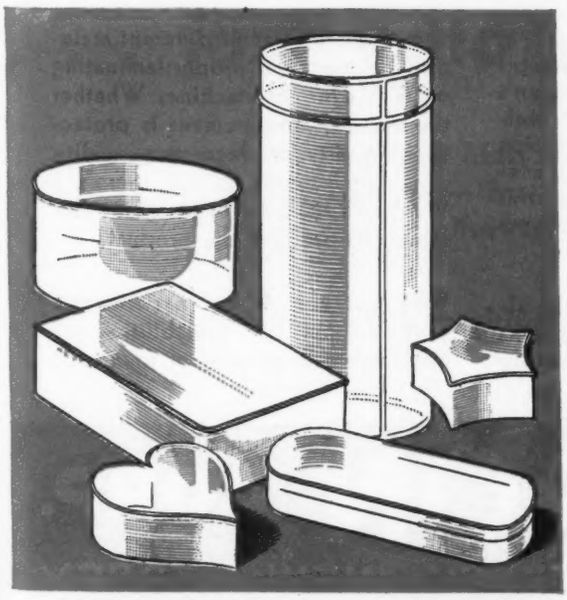
570 Lexington Avenue, NEW YORK 22, N. Y. | 221 North LaSalle St., CHICAGO 1, ILL. | 145 Public Square, CLEVELAND 14, OHIO | 300 Seventh Street, SAN FRANCISCO 3, CALIF.

420 S. San Pedro Street, LOS ANGELES 13, CALIF. | 3224 Western Avenue, SEATTLE 99, WASH. | 1208 S. W. Yamhill Street, PORTLAND 5, OREGON | Paul Brown Building, ST. LOUIS 1, MO

Windsor House, Victoria Street, LONDON, ENGLAND

Fabricated by Central States Paper & Bag Co., St. Louis 6, Mo.

A FRESH IDEA IN PACKAGING USING LUMARITH* FILM



THE CRYSTAL CLEAR container adds something, doesn't it? Farm strawberries become a dainty ready-to-eat confection when packaged this way.

Here's an economical way of giving hundreds of products from golfballs to handkerchiefs that extra appeal which means more sales.

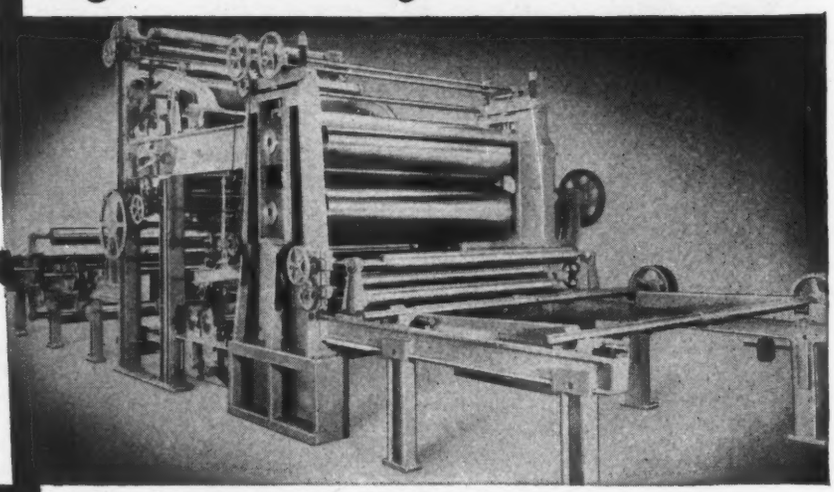
Beaded strip Lumarith containers are easily fabricated in a variety of shapes and sizes—with slide or hinged tops or snug-fitting telescope lids. The beaded edges provide rigidity and form retention, and permit the use of thinner stock.

Lumarith films—tough, easy to form and draw, transparent, non-aging, greaseproof, waterproof—are ideal for this simple, inexpensive, and sales appealing packaging method. Our technical staff will be glad to give you additional information. Celanese Plastics Corporation, a *division of Celanese Corporation of America*, 180 Madison Avenue, New York 16, N. Y.

*Reg. U. S. Pat. Off.

LUMARITH* *A Celanese* Plastic*

PART OF THE PICTURE of famous products



WALDRON LAMINATORS

Send for This NEW CATALOG

Just off the press! It explains the principle, advantages and modern methods of laminating. Illustrates and describes the many types of WALDRON Laminators.

Request a copy on your letterhead. No obligation.

Essential protection for the food of our fighting men is a vital assignment entrusted to Dobeckmun's Metalam. This effective heat sealing and moisture proof combination of aluminum foil and laminated acetate film for packages safely carries dry or liquid rations without danger of spoilage.

Here is a typical example of the almost unlimited variety of products that can be produced by combining two or more plies of different materials by means of proper laminating on WALDRON Machines. Whether the essential requirement is protection, rigidity or decorative quality or a combination of all, there's a WALDRON LAMINATION designed to produce the product.

Why not consult our experienced engineers on the possibilities for your product—present or planned?

JOHN WALDRON CORP.

Main Office & Works – NEW BRUNSWICK, NEW JERSEY

CHICAGO - 6
201 N. WELLS ST.

NEW YORK - 17
350 MADISON AVE.

BOSTON - 9
79 MILK ST.

BUILDERS OF QUALITY MACHINES SINCE 1827

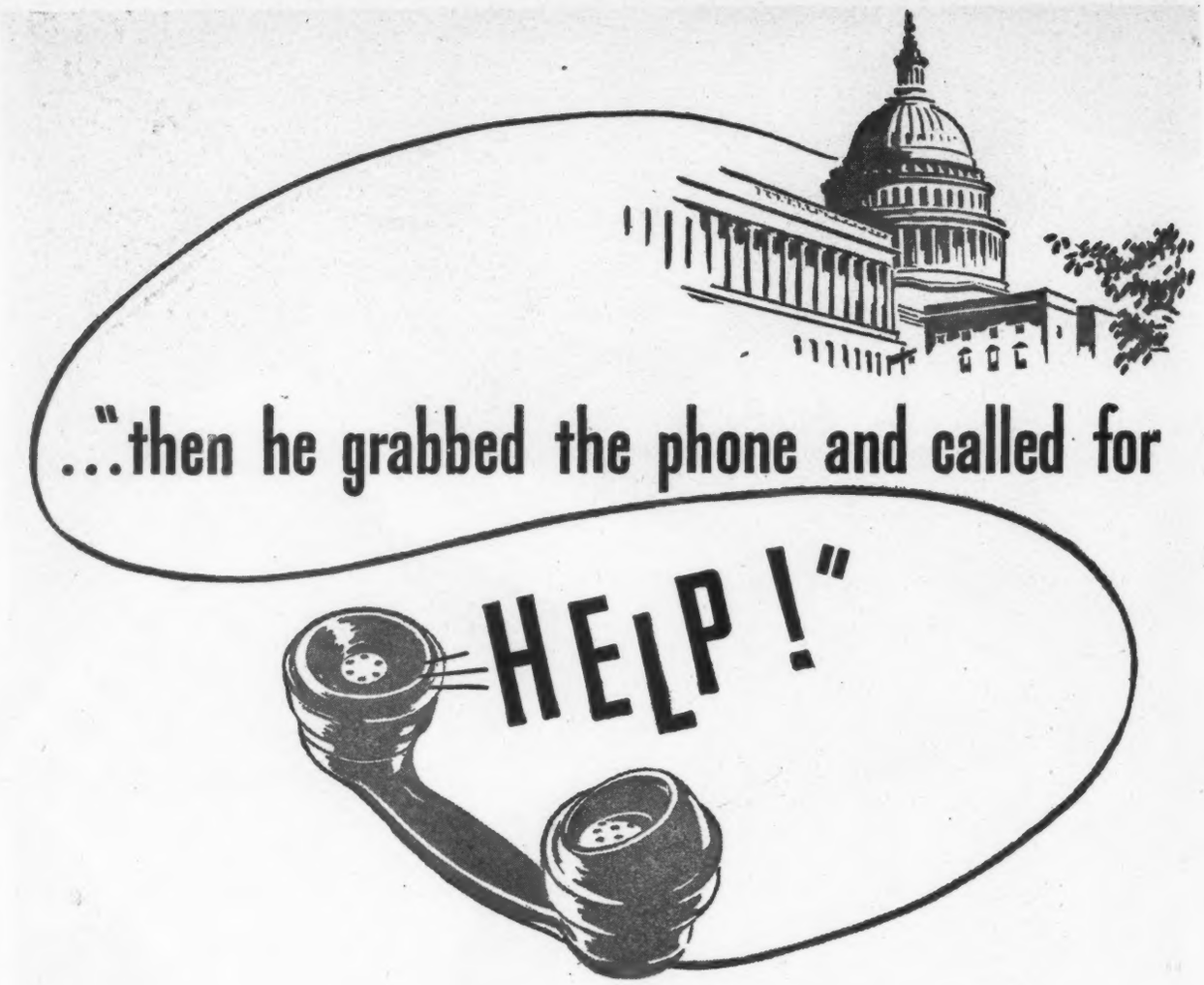
. . . just what the doctor ordered!

Mason Mailmasters don't promise a sure cure for every shipping problem — but they have rendered first-aid to pharmaceutical suppliers by offering a more convenient container for drugs and allied products.

Where shipping is a major factor, more and more people are depending on safe, speedy and economical Mason Mailmasters for their small packaging requirements. Their rugged strength, convenient sizes and exclusive wire fasteners adapt themselves equally well to assembly-line packaging or individual shipping.

The MASON BOX COMPANY

ATTLEBORO FALLS, MASS. — 175 5TH AVE., NEW YORK



And (you guessed it) we were on the other end!

For Uncle Sam wanted help with some special packaging problems for his servicemen.

The result—Uncle Sam thought we had the right answers; got his problems solved.

That was back in 1941. Since then he's been putting problems up to us regularly. Which is what we like—and would like you to do.

Follow his lead!

Just reach for your phone and call for help—our help.

We'll respond with ideas that may give your product a head start on that tough competition ahead.

And it won't cost you a cent!

For we kept our eyes and ears open on our war job—and are anxious to give you the benefit of our experiences. Add this to our 44 years of research and engineering know-how—and you're really getting something.

Let's get together!

You want an efficient, economical, appealing container for your product—a container that will catch the consumer's eye—and dollar.

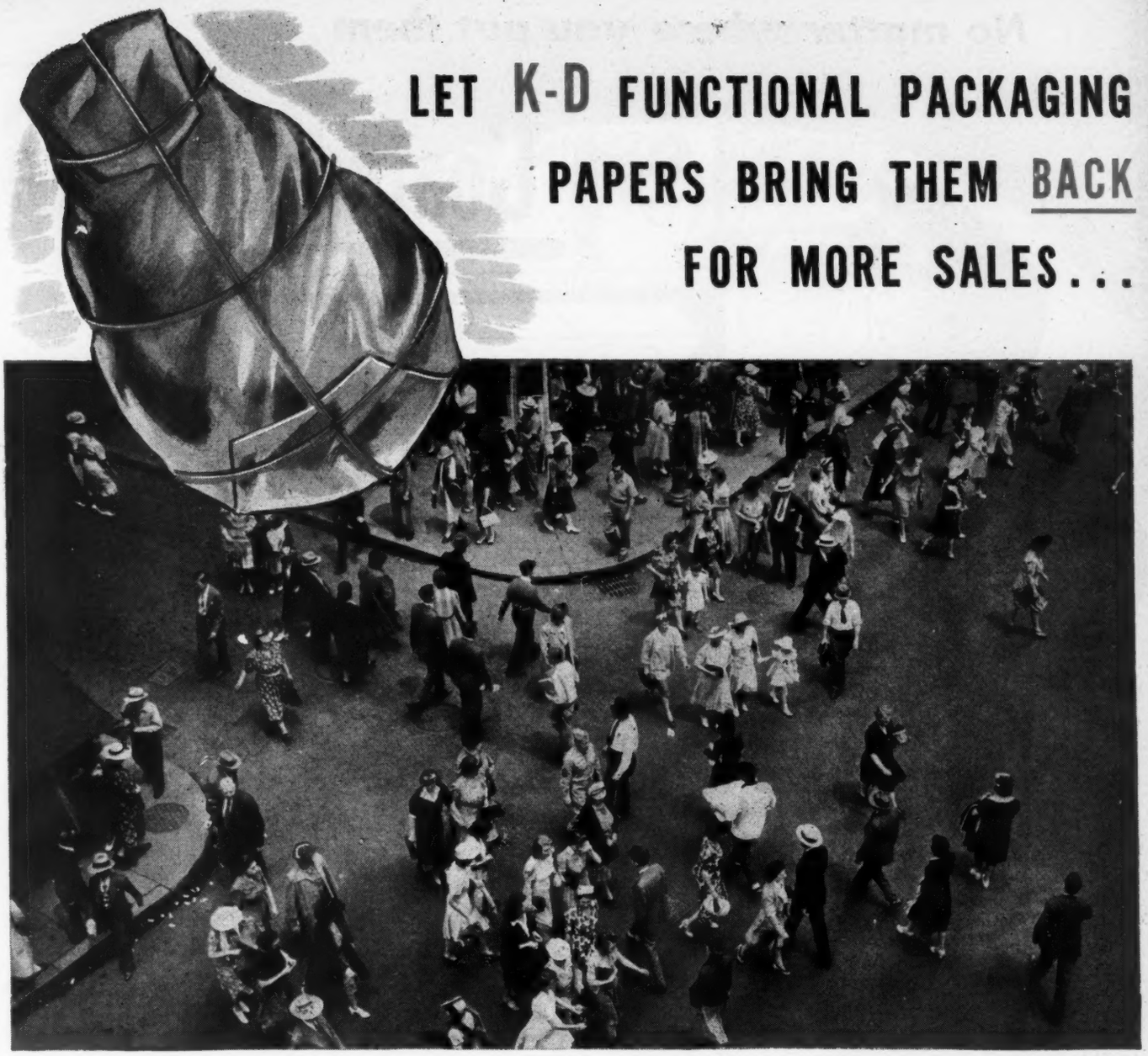
So why not make that call to our nearest representative now—or if you'd rather, drop us a line? Let's work out your problem together!

AMERICAN CAN COMPANY

230 PARK AVENUE CANCO NEW YORK 17, N. Y.

World's Largest Manufacturers of Fibre and Metal Containers

LET K-D FUNCTIONAL PACKAGING PAPERS BRING THEM BACK FOR MORE SALES...



IN SELLING GOODS, whether foodstuffs or flatirons, meats or machines, it takes customer acceptance for those repeat sales that keep profits up. And one of the strongest consumer influences is proper packaging.

By proper packaging we mean *functional* packaging—containers and wraps that *protect* the product and keep it fit until it is in the hands of the buyer. Keller-Dorian functional packaging papers help to achieve this result. Their extremely low moisture vapor transmission keeps unwanted moisture out, keeps food flavor and goodness in. K-D papers are flexible and may be scored, folded and cut or heat sealed. Single wrap coatings are sufficient for most requirements, eliminating weight and cutting packaging costs.

Two types — plastic emulsion coated and aluminum foil laminate — offer a versatile range of properties and advantages. They will not crack, peel or become tacky at high or low temperatures and are not affected by grease, sunlight, food acids and aging.

If you want to build customer acceptance for your products, ask us about Keller-Dorian functional packaging papers. They may be able to help in many ways. Free sample sheets and performance data are available on request. Why not write today?

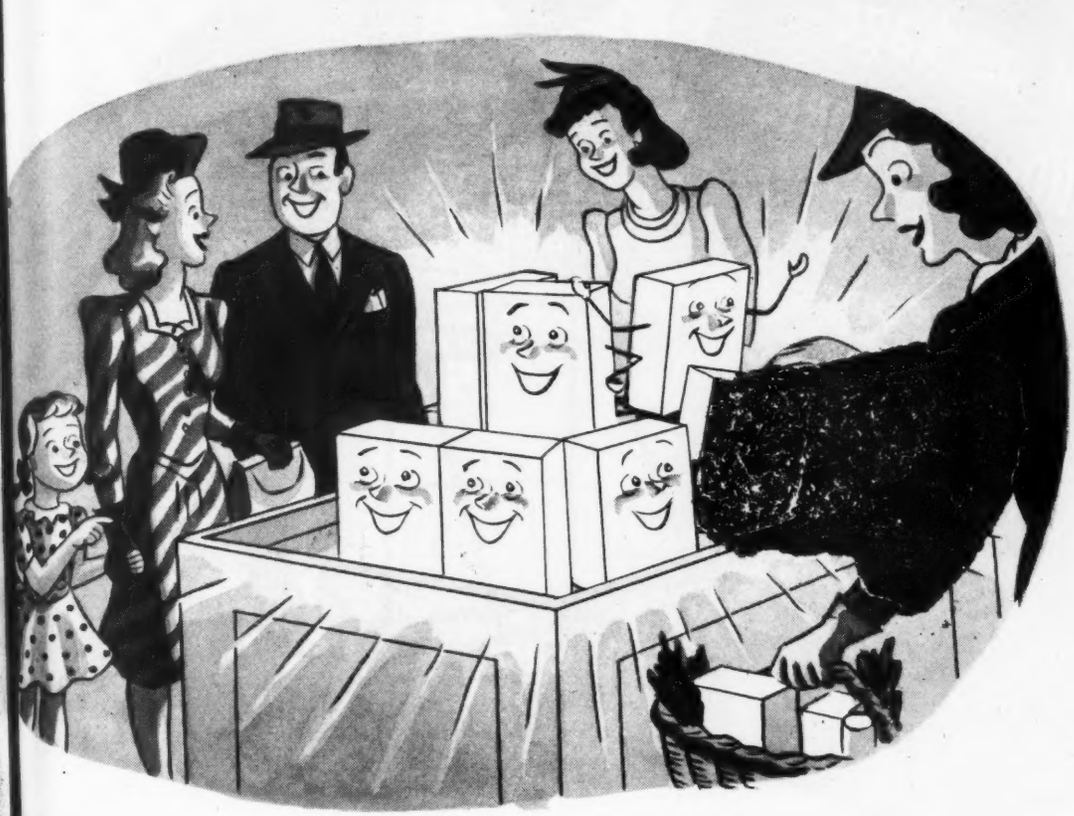
KELLER-DORIAN
CORPORATION
Empire State Building
New York 1, N.Y.

FUNCTIONAL PACKAGING PAPERS *for Protecting Perishable Products*

No matter where you put them
Coated Lithwite
Root Day

Cartons *SPEAK UP... AND SELL*

THEY HAVE THE EDGE ON THE OLD "SILENT SALESMAN" TYPE OF PACKAGE



WHETHER YOUR PRODUCT is advertised, or not advertised, better display at the point of sale helps make *more* sales . . . and folding cartons of *Coated* Lithwite give products *outstanding* display. And why? Because this revolutionary, machine-coated paperboard makes pictures and colors more eloquent, gives voice to your sales story.

Smooth, velvety *Coated* Lithwite cartons have a quality look and feel. But more important, product pictures on these finer folding cartons stand out with a color brilliance and realism that implants a buying urge.

Deliveries . . . when? We wish we could say. But right now our carton plants are producing to capacity, and the backlog of orders is the greatest since we pioneered *Coated* Lithwite six years ago. Here's a suggestion: Get in touch with a Gardner-Richardson sales representative and discuss the matter of future delivery on *Coated* Lithwite cartons.

Note These Outstanding Coated Lithwite Advantages

1. Made by a revolutionary process. *Coated* Lithwite is the brighter, whiter paperboard that is formed, made and coated in one high-speed operation. Proved and improved for six years.

2. Means more eye-appealing cartons. *Coated* Lithwite has a smooth, rub-resistant, chalk-free surface. Forms a better base for printing inks and plates—reproduces even the smallest type cleanly, crisply. Brings colors up brilliantly—gives halftones a sharp realism.

3. Fewer jammers and leakers. *Coated* Lithwite scores without flaking or shattering. Takes a positive, tight seal.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

The average shopper gets a lot of buying ideas *inside* the store. Surveys show that impulse buying accounts for 24% of the sales in service food stores . . . 51% in supermarkets . . . 42% in department stores . . . 53% in variety chain stores.

Transparent packaging will help your product cash in on these impulse purchases. In one quick glimpse, the shopper gets a complete sales message that enhances the product . . . furnishes evidence of its quality . . . suggests ways to use it. Sparkling, transparent Du Pont Cellophane packaging lets your product be its own best salesman!

Protection, too, is important in impulse sales. By delivering *satisfying* quality, it makes steady customers out of impulse buyers. Du Pont Cellophane gives *moistureproof* protection . . . and thus safeguards freshness, flavor and all-round quality.

Packaging economy will be important . . . to help give more value to the shopper. You get transparent protection at *lowest cost* in Du Pont Cellophane.

Du Pont research has helped to make possible the 20 price reductions in the history of Du Pont Cellophane. It's constantly at work developing and improving packaging films.

The functions of the package in modern merchandising are discussed in a stimulating new booklet, "Help Yourself to Lower Distribution Costs." Write today for your copy. It will help you get more out of your package. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.

DU PONT Cellophane

REG. U.S. PAT. OFF.

Shows what it Protects—at Low Cost

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

It's more than 98% steel, less than 2% tin

How a Piece of STEEL and a Little TIN
BANISH HANDLING HEADACHES

● Lift' em . . . tote 'em . . . stack 'em! *Cans* make your products easy to handle.

On busy retail shelves and counters, compact steel-and-tin containers . . . which are more than 98% steel, less than 2% tin . . . can be easily and safely stored and effectively displayed. What's more, your products packed in trouble-free cans please consumers because sturdy cans are safe to handle . . . always stay neat and clean. And sturdy steel-and-tin cans preserve the quality of your merchandise.

From manufacturer to consumer, cans provide *economical* handling because they cut down loss due to breakage . . . speed up automatic packaging operations . . . require no special handling or packing to guard your products against shipping hazards.

For all-round easy and safe handling of your products, plan *now* to use steel-and-tin cans . . . when *cans* are again available for unlimited civilian use.

5 Reasons Why Better Packaging Plans Call for Products Packed in Cans

1. Cans don't break, split, crack or tear.
2. Protect contents against air, light and moisture.
3. Are economical to pack, ship, and store.
4. Cans display attractively.
5. Labels can be permanently lithographed on cans.

Preparing the Public To Demand Cans Again

Across America this month, more than 34,000,000 full-color, full-page ads are re-emphasizing to shoppers the advantages of using merchandise packed in *cans.* Watch for these ads in *Life, Look, American Home, McCall's, Good Housekeeping, Better Homes & Gardens, Woman's Day, Parents' Magazine* and in the magazine sections of 44 Sunday newspapers.

CAN MANUFACTURERS INSTITUTE, INC., NEW YORK

NO OTHER CONTAINER PROTECTS LIKE THE CAN

70% MORE CARTONS PER OPERATOR

CECO

Adjustable

CARTON SEALER

The name "Bauer & Black" is synonymous with quality surgical cotton products. These, like other leading bandages and absorbent cotton products, are packaged in a wide range of carton sizes on CECO Adjustable Carton Sealers. Both ends of the filled cartons are sealed simultaneously and automatically. Cartons are square, clean, neat, and tamper-proof.

A significant statement in a recent letter from Bauer & Black reads as follows:

"On the machine designed for our larger packages, we had an increase of 500% per operative over the hand method of cartoning. On the first machine we purchased, on which we process our smaller sizes, we had an increase of 70% per operative over the hand method of cartoning."

No matter what kind of product you package, let us demonstrate how a CECO Adjustable Carton Sealer can produce a better-looking carton, faster and at lower cost. Write.

CONTAINER EQUIPMENT CORPORATION

212 Riverside Ave., Newark 4, N. J.

CHICAGO • TORONTO
BALTIMORE • ST. LOUIS
SAN FRANCISCO • ROCHESTER

Packaging Machinery Specialists

Things to look forward to

A BETTER PACKAGE FOR

RETAINING MOISTURE CONTENT

Designed by

FRANK D. PALMER, INC.

using

ALCOA

Aluminum Foil

In packing frozen fruits you have *two* forms of moisture to seal in tightly. Liquid and vapor. And here's a package . . . not yet *thoroughly* tested and proven, we confess . . . that looks like a good answer.

It will be made with Alcoa Aluminum Foil . . . *on the inside.* The foil will be laminated to the carton material and every seam in the carton will be heat-sealed to prevent leakage and retain moisture-vapor at below zero temperatures. Oxidation will be minimized.

It's another example of how package and machinery designers and producers are turning to aluminum foil in developing truly moisture-proof packages. Odorproof and tasteproof, too. And they'll be economical to use.

Alcoa is working closely with Frank D. Palmer, Inc., and other packaging people on these new developments. They may be just what you are looking for. Find out. Write ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA

ALUMINUM

ALCOA ALUMINUM FOIL

1946
MODERN PLASTICS CATALOG

(Formerly Plastics Catalog)

Encyclopedia of Plastics

in preparation

ORDER COPIES NOW!

The annual Encyclopedia of Plastics, now in preparation by its outstanding staff of editors, will be bigger and more comprehensive than any previous edition.

It will encompass all of the 1945 progress and advances in materials, equipment and techniques, based on the firm foundation of encyclopedic coverage of every facet of the far-flung plastics industry.

More than 1300 pages

Case-bound **Library-size**

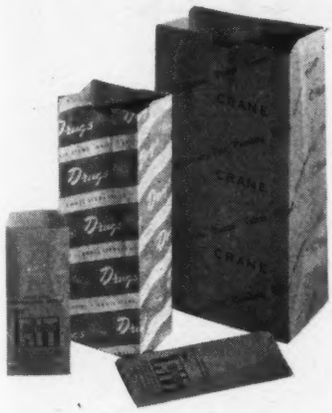
$6.00 per copy

Foreign $7.00 **Canadian $8.00**

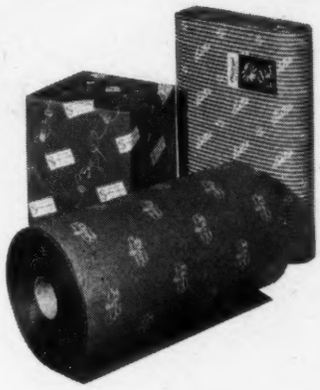
PLASTICS CATALOGUE CORP.

122 EAST 42ND STREET **NEW YORK 17, NEW YORK**

TAILOR-MADE BAGS



PRINTED AND EMBOSSED WRAPPINGS

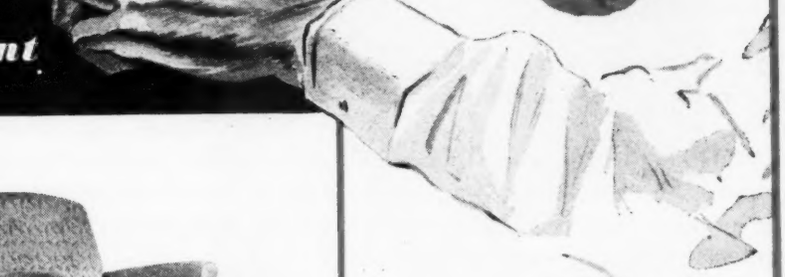


For your Packaging Needs . . .

THILCO

Functional Papers meet every Requirement

MACHINE DESIGNED PAPERS



GLASSINES AND GREASEPROOFS

WATERPROOF ASPHALT PAPERS

WAXED PROTECTION PAPERS

THILCO *Functional* PAPERS

THILMANY
PULP & PAPER COMPANY
KAUKAUNA • WISCONSIN

...So now you squeeze wood from a tube

PLASTIC WOOD didn't always come in a tube. Used to come in cans only.

Which was pretty discouraging for the average householder, who used the product only occasionally. For contents of the can would often dry out between uses.

What was needed was a small air-tight container. One that could be easily opened and closed without exposing much of the contents to evaporation.

Which is what brought the Plastic Wood people to our door. Since Sun Tube has turned out more than one billion tubes and pioneered many new uses, it was felt that we might work out a satisfactory container.

We did. Today... as a result of putting wood in a tube... Plastic Wood sales to the occasional user have increased enormously!

What this means to you

There may be a closer connection than you think between this packaging problem and the one *you* face—now or postwar.

Because the Plastic Wood story is simply typical of the many unusual packaging problems we have helped to solve through the use of Sun Tubes.

Now, you probably know the advantages of the collapsible tube. The fact that it's convenient and compact, that it's germ-proof and light-proof. That the collapsible tube is virtually unbreakable, and that contents won't dry out in use.

What you may *not* know is that new developments have made Sun Tube the ideal container for many products not formerly considered even prospects for a tube.

Maybe yours is one of them. At any rate, the Sun Tube representative nearest you will be glad to furnish you with information and advice. Won't you give him a ring or drop him a card today?

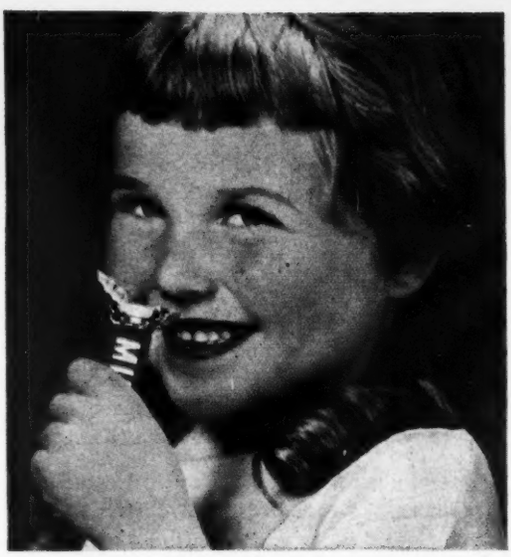
SUN TUBE CORPORATION

Hillside, New Jersey

CHICAGO 1, ILL.	ST. LOUIS 1, MO.	ST. PAUL 1, MINN.	LOS ANGELES 27, CALIF.
James L. Coffield, Jr.	*M. P. Yates*	*Alexander Seymour*	*R. G. F. Byington*
360 No. Michigan Avenue	Arcade Building	615 Pioneer Building	1260 North Western Ave.

Before the war most of America's famous brands . . . cigarettes, candy, chewing gum and many foods . . . were packaged in Reynolds Foil. Already manufacturers are planning to return to foil-wrapped packages . . . as soon as available for civilian use . . . proof that foil best preserves freshness and flavor.

Foil is a complete moisture—and moisture-vapor barrier. If your problem is to keep moisture *in*—foil can solve it. If it is to keep moisture *out*—foil can solve that, too! Consult Reynolds!



For many products foil has a vitally important advantage. Foil is *light-proof!* Light is a major cause of rancidity. Many foods need foil's light-proof protection. Foil preserves flavor, freshness too. Reynolds have made a special study of food packaging. Ask us for data on the many new developments.

Shipment of war material has made the most stringent demands ever known in the packaging field. Reynolds Laboratories developed 90% of the foil packages of war. This experience is now being used in the development of vastly improved packaging for consumer goods—from peanuts to pistons! A corrosion-proof method of packaging metal parts is one development that might interest you!

Reynolds, for 25 years the resourceful and progressive leader in metal foil packaging, is now perfecting many new, revolutionary protective packages. Consider foil—consult Reynolds. Write Reynolds Metals Company, Richmond 19, Virginia.

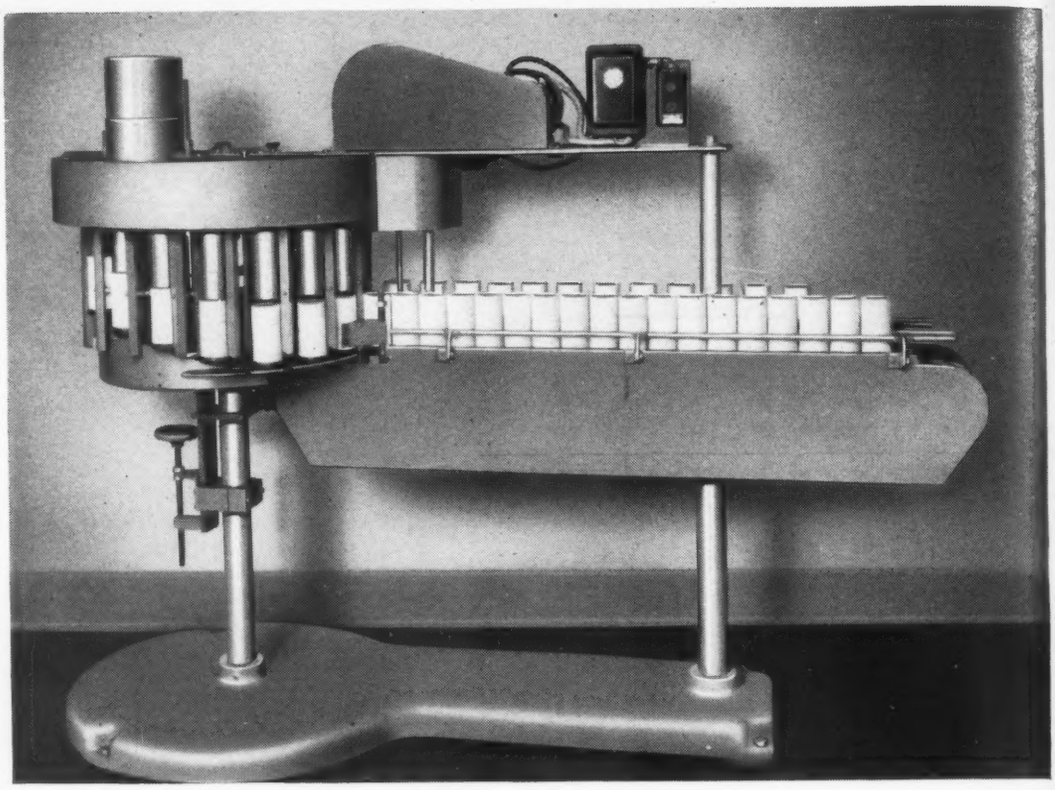
REYNOLDS FOIL

PURE ALUMINUM

THE FRESH-FLAVOR WRAP

REYNOLDS METALS

THE PACKOMATIC WAY IS THE AUTOMATIC WAY!



Avoid Waste and Annoying Dust with This Telescoping Volumetric Filler

● Packers of free and non-free flowing products—such as cleansers, bowl cleaners, flake lye, drain pipe openers, chemical cleaners, soot removers, coffee concentrate, baking powder, cereals, soap powder, etc.,—will want the facts and data on PACKOMATIC'S TELESCOPING VOLUMETRIC FILLER.

Designed for filling cylindrical containers, paper and metal cans—also rectangular cartons—PACKOMATIC'S TELESCOPING VOLUMETRIC FILLER helps avoid waste and annoying dust . . . because packages are *raised* onto the filling tubes, then lowered in one smooth, continuous and effective operation.

PACKOMATIC'S TELESCOPING VOLUMETRIC FILLER fills up to 100 packages per minute . . . can be *built* on *special order* for *higher* speeds. Unit requires minimum of floor space . . . minimum of attention. Precision design and sturdy construction insure you day-in, day-out trouble-free operation.

Submit your carton-filling and case-sealing specifications to PACKOMATIC for postwar check and suggestion. Contact the PACKOMATIC office nearest you, as listed in Metropolitan Classified Directories. Or send details and product samples to Joliet . . . no charge for counsel . . . no obligation to buy.

TYPICAL PACKOMATIC EQUIPMENT

Case Sealers
Case Imprinters
Carton Sealers
Volumetric Fillers
Net Weight Scales
Carton Making Machines
Dating (Coding Devices)
Paper Can Tube Cutters
Paper Can Tube Gluers
Paper Can Shrinkers
Paper Can Cappers

PACKOMATIC

PACKAGING MACHINERY

J.L. FERGUSON CO. JOLIET, ILL.

New York • Chicago • Boston • Cleveland • Denver • Los Angeles • San Francisco • Seattle • Baltimore • Philadelphia

The swift march of merchandising trends is placing a new emphasis and responsibility on packages.

More than ever before your package must possess modern sales appeal . . . the ability to attract attention and help sell itself.

Packages by Milprint are designed for the tough competitive conditions just ahead, the kind of packages you will want to win and keep new customers.

Printed Cellophane, Pliofilm, Glassine, Aluminum Foil, Vinyl, Lacquer coated and Laminated Papers in all forms, including Sheet Wraps, Rolls, Pouches, or Specialty Bags, Revelation Bread Wraps, Specialty Folding and Window Cartons, Counter Displays, Simplex Pie and Cake Units.

MILPRINT, INC., MILWAUKEE, WIS.

Sales Offices: New York • Chicago • Philadelphia • St. Louis • Los Angeles • San Francisco • Pittsburgh • Cleveland • Cincinnati • Boston • Dallas • Indianapolis • Minneapolis • Atlanta • Kansas City • Grand Rapids • Memphis

MILPRINT

PACKAGING CONVERTERS, PRINTERS, LITHOGRAPHERS

SUPER-MARKETS are constantly increasing in popularity because the housewife finds everything she needs under one roof. It's a one-stop job that always saves time, and often saves money.

Like a balanced meal, packaging also requires careful shopping, for many different materials. Each individual product must have exactly the right combination of appearance, protection, production efficiency and economy.

Riegel, many years ago a "corner store" with only a few highly technical papers, is now the largest "Super-Market" for printing, industrial and special packaging papers. They range from a 16 lb. glassine to a 400 lb. pattern paper, and the service we render is highly individual . . . adapting our papers to your needs.

Why not accomplish your objectives the "one-stop" Riegel way?

600 RIEGEL Papers

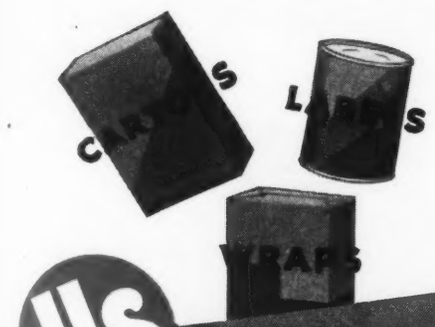
The Riegel sample files contain more than 600 different grades—a gold mine for the paper buyer who wants the best possible combination of protection, production efficiency and economy, to meet his own individual requirements.

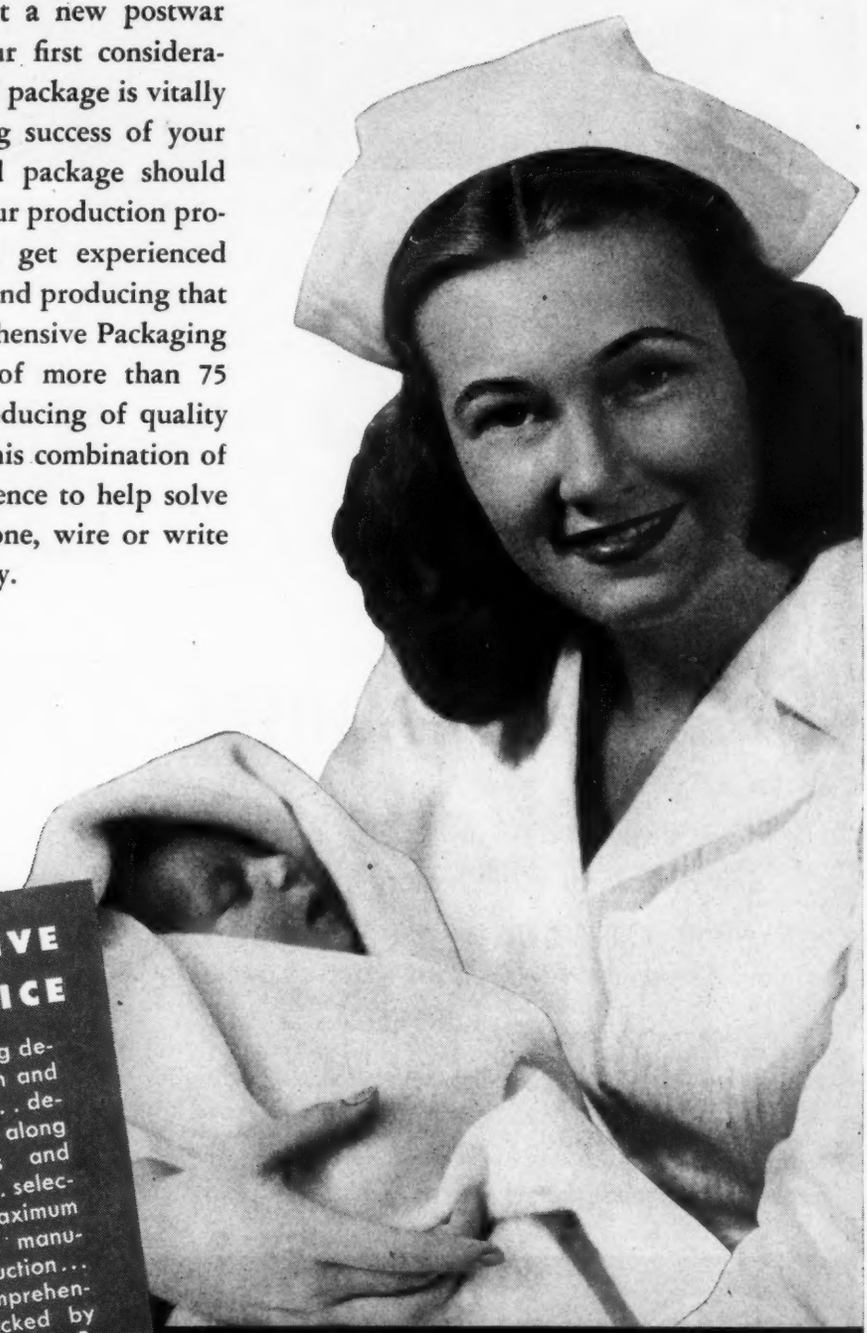
We make glassine, greaseproof, sulphite, wet-strength—printed, embossed, resin-impregnated, laminated, oiled, lacquer-coated, waxed, dry-waxed—packaging papers, converting papers, printing papers and industrial papers in endless variety.

RIEGEL PAPER CORPORATION • 342 MADISON AVENUE • NEW YORK 17, NEW YORK

IS THERE A NEW MEMBER IN YOUR PRODUCT FAMILY?

If you are planning to market a new postwar packaged product—one of your first considerations is the PACKAGE. A good package is vitally important to the merchandising success of your product. •Furthermore, a good package should contribute to the economy of your production processes. Therefore, you should get experienced packaging counsel in planning and producing that package. U. S. P. & L. Comprehensive Packaging Service offers the experience of more than 75 years in the designing and producing of quality packaging materials. Call on this combination of creative and production experience to help solve your packaging problems. Phone, wire or write for a "U-S" representative today.





U S and P L

COMPREHENSIVE PACKAGING SERVICE

. . . includes all phases of packaging design and production . . . origination and checking of product trade name . . . development of the package design along sound merchandising principles and correct functional applications . . . selection of proper materials for maximum efficiency and practicability in manufacture . . . highest quality production . . . dependable delivery. This Comprehensive Packaging Service is backed by 75 years of experience in which U. S. P. & L. has served many of the country's leading users of packaging materials.

THE UNITED STATES PRINTING & LITHOGRAPH CO.

EXECUTIVE OFFICES: 384 BEECH ST., CINCINNATI 12, OHIO

SALES OFFICES IN PRINCIPAL CITIES

5 GREAT "U-S" PLANTS PRODUCING QUALITY PACKAGING AND ADVERTISING MATERIALS

Salesbuilders—

an extra touch of distinction
in COLOR *and* EYE-APPEAL
goes with plastic protection

with EXTRA *packaging advantages*

Clearsite* *plastic* CONTAINERS

Have equipped many quality products with outstanding distinction. Scores of various commodities enlist the features indicated above because a better package implies a better product.

Also manufacturers of **EXTRUSION and INJECTION MOLDINGS**

Every advantage you include in your container, is logically an advantage in selling. If you can include protection against *breakage* with out-of-the-ordinary Eye-appeal and clear view of the product marketed, you have a greater pulling power on the preference of the buyer. CLEARSITE made of Cellulose-acetate "safety base," gives these advantages to a marked extent.

Expert Package-designers are at Your Service . . .

CELLUPLASTIC CORPORATION

PLASTIC CONTAINERS
AND
PLASTIC PRODUCTS

40 AVENUE L NEWARK 5, N. J.

NEW YORK OFFICE—630 FIFTH AVENUE WEST COAST CONTAINER SERVICE COMPANY, LOS ANGELES 27, CAL.

MEHL BAGS can give your product the protection it needs for SAFE delivery

No matter what measure of protection your products demand in shipping against water, moisture, grease, acid, dirt, dust, and other elements—there is probably a Mehl Bag that will do the job effectively and economically for you.

Our experience in developing special packages *plus* our versatility in converting

- **Papers**
- **Foils**
- **Films**
- **Laminations**
- **And other specialty materials**

glued, heat-sealed, sewed or otherwise, into both primary and secondary packaging are at your service and the development of the proper protective package.

Write, wire or phone us your packaging problem—or, if you prefer, we will gladly have a representative call on you.

A DIVISION OF MEHL BAGS SYDNEY-THOMAS CORP.

MEHL MANUFACTURING COMPANY

Division of Sydney-Thomas Corp.

2351 FERGUSON ROAD, CINCINNATI 5, OHIO

277 BROADWAY, NEW YORK 7, N. Y.

CONVERTERS OF PROTECTIVE PAPERS • CELLOPHANE • LAMINATED FOILS • and other PAPERS and FILMS

"We wish to commend you for your special adhesive"

An important new war-product, *Protective Flashburn Cream,* helps prevent injuries due to flash burns. This cream, produced by West Disinfecting Company, manufacturers of "CN" and other products for the promotion of sanitation, must be securely safeguarded on its way over-seas.

The West Company writes: "We believe this product is one of the most important items developed during the war. It is packed for over-seas shipment in V-Cases necessitating the use of a water-resistant adhesive, which is a required part of Government specifications to which we must comply. We have found your special adhesive excellent for our purposes and wish to commend you for this excellent product."

Arabol takes pride in this evidence of ability to meet each manufacturer's particular requirements. This indicates why more than 10,000 adhesives formulas are on file in our laboratories—each one representing a determined effort to supply the exact adhesive for a specific requirement. Write for full information on Arabol V-Case and other Case Sealing Adhesives. See the Arabol Representative when he calls—he knows adhesives.

THE ARABOL MANUFACTURING CO.

Executive Offices: **110 East 42nd St., New York 17, N. Y.**

CHICAGO—54th Ave. & 18th Street • SAN FRANCISCO—30 Sterling Street

Branches in Principal Cities • Factories in Brooklyn, Cicero, San Francisco

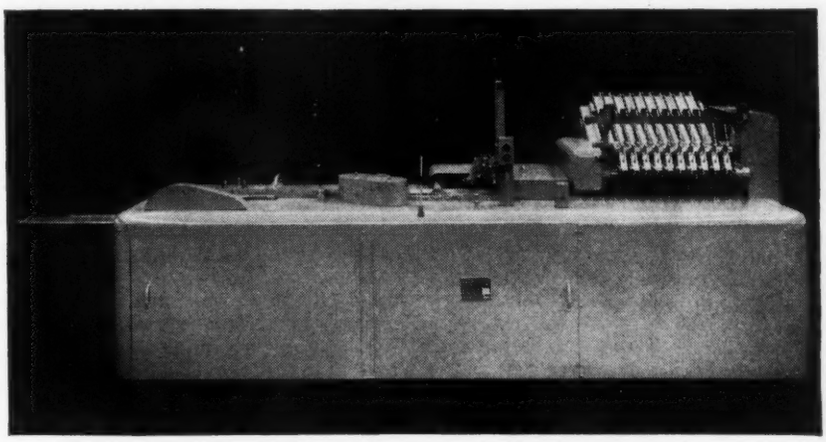
Adhesives? . . . ARABOL!

SIXTY YEARS OF PIONEERING

THREE major headaches in razor blade cartoning are miscounts, empty wrappers and broken blades. But not one of these defects can escape detection when you install a Jones Constant Motion Cartoner—such as the Conrad Razor Blade Co. cartoner pictured below.

For as this cartoner operates, a mechanical finger "feels" every blade—checks the contents of every carton before it leaves the machine. Defective loads are instantly detected for easy replacement—work is immediately resumed.

The "finger that finds the faults" is only one advantage of the Jones razor blade cartoner, which embodies the characteristic features of Jones design and construction. It has the fewest moving parts consistent with the complex operations performed. Its motions are simple — direct —positive —with the least possible handling of materials.



Most of America's automatically cartoned products are Jones cartoned—let us show you how the Jones Constant Motion Cartoner will put the finger on *your* cartoning problems.

R. A. JONES & COMPANY, INC.

P. O. Box 485 CINCINNATI, OHIO

No More Weeping!

The story of the countless food and drug products ruined by absorption or loss of moisture, is a very sad story indeed. But neither you nor your product need shed an unnecessary tear when your package is protected by...

SYNTRON
Moisture Vapor Proof Heat-Seal Coatings

By setting up a barrier against atmospheric conditions with SYNTRON Moisture Vapor Proof Coatings applied to your package, and by giving it the added protective property of heat-sealing, you can keep your products "factory-fresh" for much longer periods of time. SYNTRON Moisture Vapor Proof Coating is especially developed for all types of paper bags and packages...including glassine. This coating is non-toxic, odorless, oil and grease resistant. 1 to 5 grams moisture vapor per 24 hours per square meter. Block—above 135° fahrenheit under 1 lb. pressure per square inch. This is just one of the many SYNTRON coatings developed by the Gordon-Lacey Research Laboratories for use on paper, wood, plastic, fabric, metal, etc.

Write for full information concerning your coating problem.

SYNTRON* Coatings for PAPER CLOTH METAL

*TRADE MARK

GORDON-LACEY CHEMICAL PRODUCTS CO.

57-02 48th STREET • MASPETH, NEW YORK

HERE'S YOUR CHANCE TO TEST VIPACO '6-ACTION' GUMMED TAPE

1. STICKS FASTER!
2. GRIPS STRONGER!
3. SEALS CLEANER!
4. WON'T SIDE SLIP!
5. FOLDS SMOOTHER!
6. ADHERES PERMANENTLY!

Here's the amazing, improved gummed sealing tape that means better, more economical packing and shipping for you. VIPACO "6-Action" gummed tape is stronger, yet less bulky . . . a specially prepared glue gives even overall coverage and won't side-slip . . . unusual flexibility allows for gripping around corners . . . it sticks instantly without added pressure.

VIPACO gummed sealing tape is the answer to many a wrapping problem! It's available in all sizes. *Test it for yourself*—write now for a SAMPLE—no obligation. Prices on request.

DISTRIBUTED BY

The VIKING

PAPER COMPANY, INC.

542-544 WEST BROADWAY
NEW YORK 12, NEW YORK

MAIL THIS COUPON FOR SAMPLE

VIKING PAPER COMPANY, INC. A
542-544 West Broadway, New York 12

SEND ME a Sample of your improved VIPACO "6-Action" Gummed Sealing Tape—I'd like to test it for myself. No obligation.

Name_____

Address_____

City_____ State_____

Bemis Accepts The Responsibility

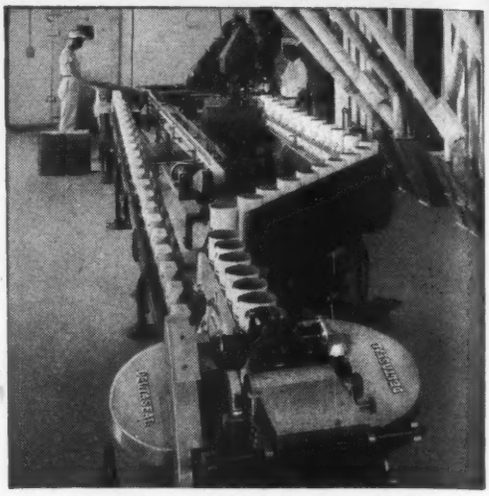
FOR CLOSING MACHINERY SERVICE • BAGS

When You Use the Bemis Deltaseal System of Packaging

☆ ☆ ☆

Now, from *one* company you can get *all* the elements of a complete packaging service. The Bemis Deltaseal System of Packaging has proved the way to increased sales, lower packaging costs for manufacturers whose products are sold in powdered or granular form.

Look at these three basic packaging functions for which Bemis takes the responsibility.



1. **Deltaseal Bag Closing Machinery**—Designed by Bemis packaging specialists.

2. **Service**—Bemis specialists assist you by making timely suggestions for new efficiency on your packaging lines.

3. **Bags**—The Bemis Deltaseal Bag, colorfully printed with your brand, gives you the Deltaseal feature, the "easy pour" spout that has won enthusiastic consumer acceptance and is equally popular with your trade.

BEMIS
Deltaseal*
SYSTEM OF PACKAGING

BEMIS BRO. BAG CO.
Minneapolis, Minnesota

OFFICES: Baltimore • Boston • Brooklyn • Buffalo • Charlotte Chicago • Denver • Detroit • East Pepperell • Houston Indianapolis • Kansas City • Los Angeles • Louisville Memphis • Mobile • New Orleans • New York City Norfolk • Oklahoma City • Omaha • Orlando • Peoria St. Helens, Ore. • St. Louis • Salina • Salt Lake City San Francisco • Seattle • Wichita • Wilmington, Calif.

BETTER BAGS SINCE 1858

* Reg. U. S. Pat. Off.

CALL YOUR BEMIS REPRESENTATIVE TODAY. THERE IS NO OBLIGATION.

To help your packages "sell on sight,"

Use Texcel Tape to seal 'em tight!

To smarten up your packages,
To wrap, protect and seal,
Use Texcel Tape - it's sturdy, neat,
And packed with sales appeal.

"TEXCEL" REG. U. S. PAT. OFF.

INDUSTRIAL TAPE CORPORATION

New Brunswick, N.J.

"Package by Inland"

This is your assurance that your product will have maximum protection in shipping, at minimum cost. Correct balance, proper bracing, crush resistance, ease of handling, and advertising appeal are assured when your product is in a "Package by Inland."

INLAND CONTAINER CORPORATION

INLAND

CORRUGATED FIBRE BOXES

INDIANAPOLIS, IND. • MIDDLETOWN, OHIO • EVANSVILLE, IND. • MILWAUKEE, WIS. • DETROIT, MICH.

Kimble NEUTRAGLAS Serum Containers

Serum bottles and vials of Kimble Neutraglas — highly resistant to solvent action and chemical attack — suitable for all types of closures — offer utmost protection.

For Assurance

• • • *The Visible Guarantee of Invisible Quality* • • •

Good News!

The salesman who comes into your office with necktie askew, with rumpled suit and mussed hair isn't likely to make the sale. Your package is one of your most potent salesmen. You have spent money, lots of money perhaps, on designing it, "clothing" it, grooming it for its selling job. It is important that it gets to the point of contact safe and sound.

That's where the strong, tough, versatile Kraft boards made by Hummel-Ross come into the picture. From these are made those stout packages that get your products to their destination looking as fresh as when they left your plant.

But don't take our word for it! Ask your box manufacturer about Hummel-Ross. He knows.

HOPEWELL KRAFT

Originators • Creators

HUMMEL-ROSS FIBRE CORPORATION

Hopewell, Virginia, U. S. A.

WIRZ COLLAPSIBLE TUBES
FOR YOUR CREAMS, PASTES, POWDERS, LIQUIDS

INCREASE EYE-APPEAL, PROTECT YOUR PRODUCT, ADD CONVENIENCE

Whether your product is a newcomer or a well-established one, you can increase its eye-appeal and its convenience and at the same time keep it free from contamination in attractive, sanitary, self-dispensing WIRZ Collapsible Tubes. Designed with walls of uniform thickness, correct structure and orifice, WIRZ Tubes take decorative inks and lacquers beautifully. Self-dispensing, convenient, they prevent waste, protect your product and your customer good-will. Let us help you plan now for this extra appeal, protection and convenience.

A. H. WIRZ, INC.

Established 1836

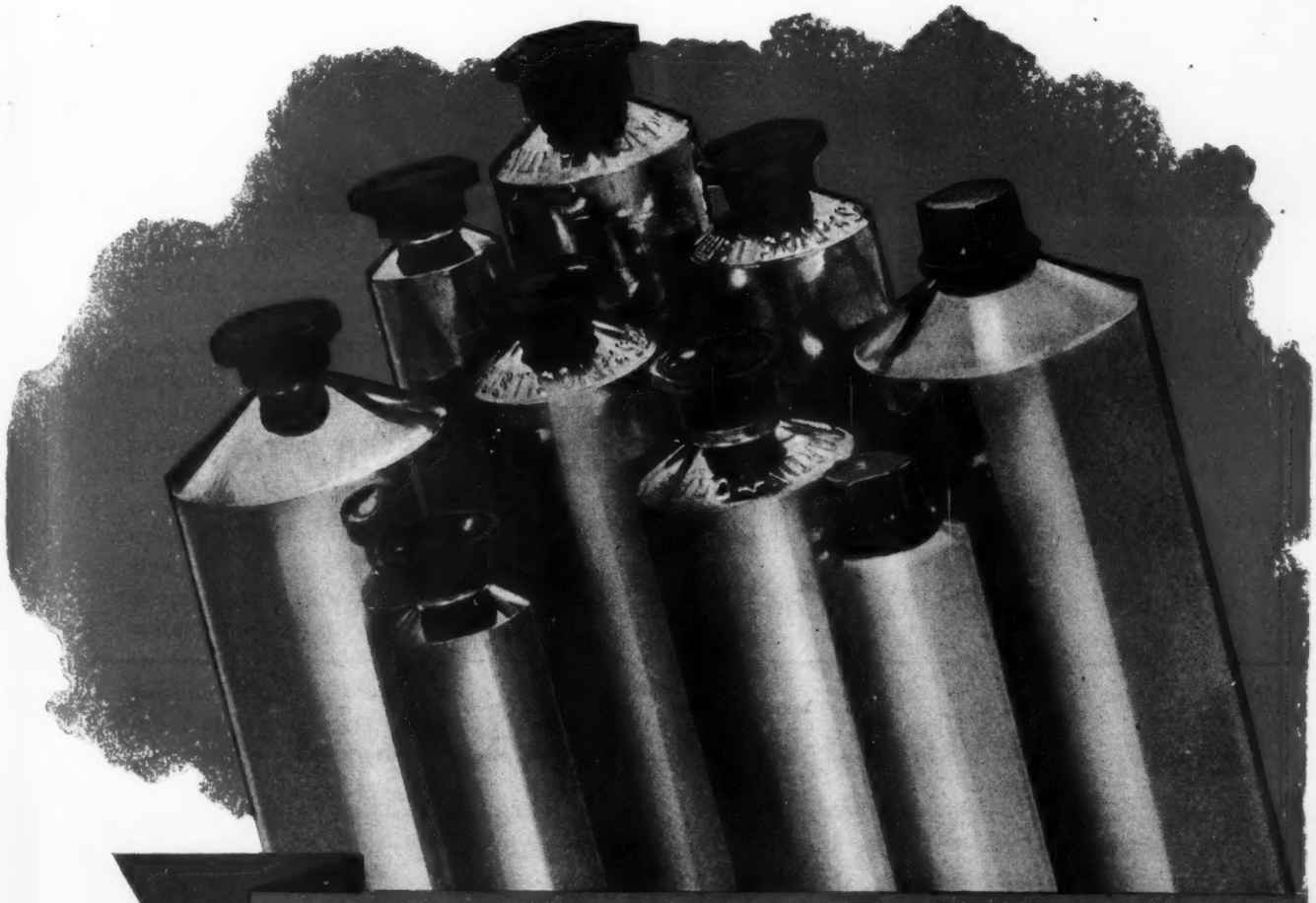
CHESTER, PA.

★

Export Division—751 Drexel Building, Philadelphia 6, Pa.

★ ★

New York 17, N. Y. 30 E. 42nd St. | Chicago 4, Ill. 80 E. Jackson Blvd. | Memphis 2, Tenn. Wurzburg Bros. | Havana, Cuba Roberto Ortiz Planos | A. G. Spilker { Los Angeles 14, Calif., 1709 W. 8th St. / Exposition 0178—Also Danville, Calif.



COLLAPSIBLE METAL TUBES • LACQUER LININGS • WAX LININGS • WESTITE CLOSURES • SOFT METAL TUBING • HOUSEHOLD CAN SPOUTS • APPLICATOR PIPES • COMPRESSION MOLDING

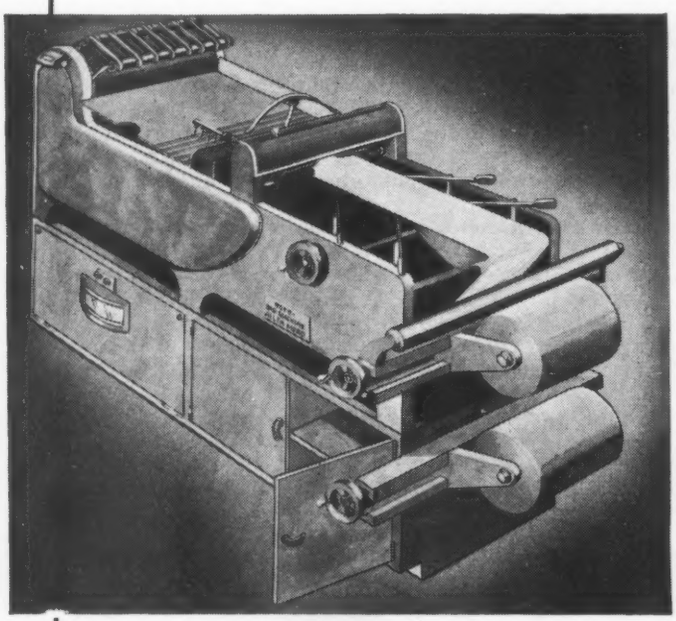
ROTO BAG MACHINE

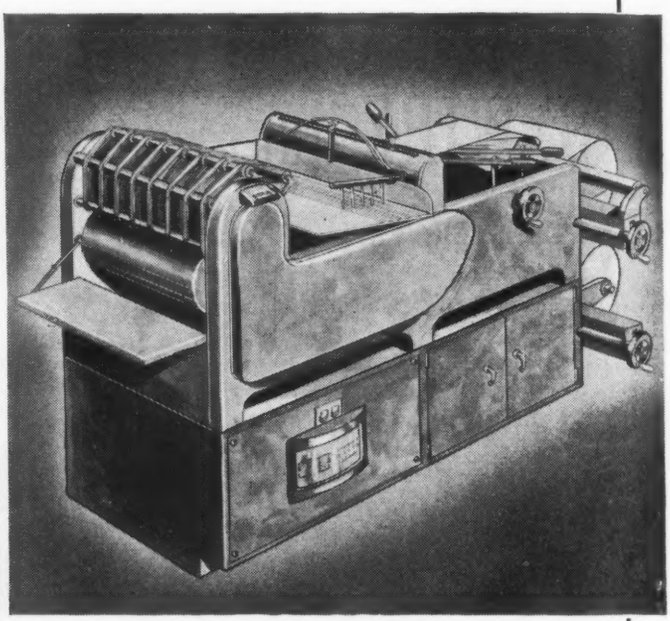
handles

CELLOPHANE • DIAPHANE • MARALUX

or any heat-seal coated paper

FLAT--SQUARE BAGS





HEAT

ELECTRONICALLY CONTROLLED

PRECISE CONTROL PROVIDED BY THE USE OF WHEELCO ELECTRONIC PRINCIPLE PYROMETER

READY FOR IMMEDIATE DELIVERY

ALLEN-MEAD

P. H. Diffenbaugh
Direct Factory Representative
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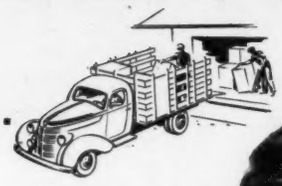
Chicago, Illinois
Phone: State 1100

Home Office
222 So. San Pedro St.
Los Angeles, Calif.
Phone: TU 7649

DESIGNERS AND BUILDERS OF SPECIAL EQUIPMENT

OVERSEAS... OR OVER HERE... 

DELIVER THE GOODS

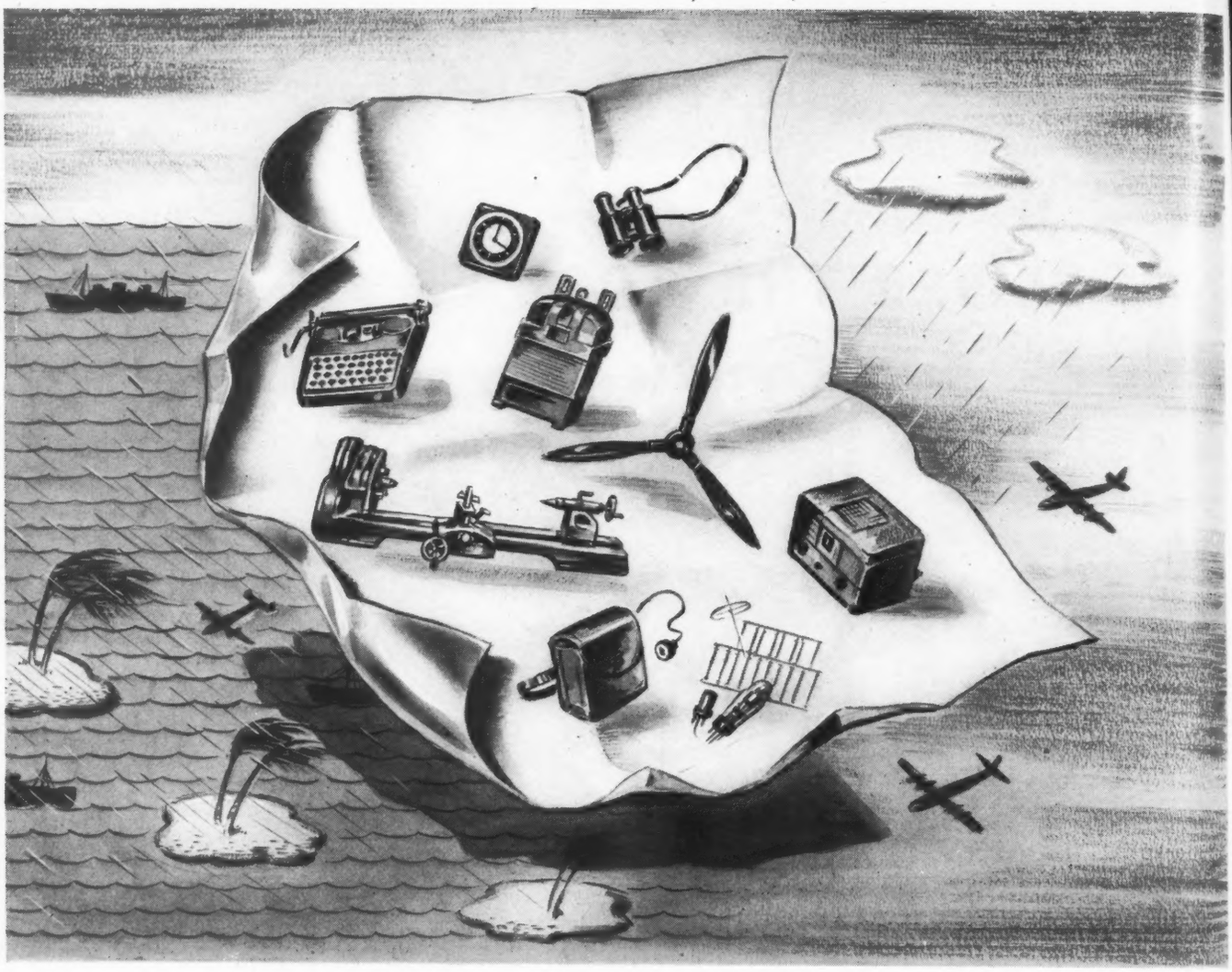
Dry!

Shipping overseas? Let WOLFE Liners "convoy" your product safely through moisture hazards during shipment or storage. These Liners are veterans of Arctic-to-Tropic war shipping . . . to make all types of cases and cartons WATERPROOF.

In your plans for civilian products —now or in the future—check with WOLFE about packaging! Safeguard quality and goodwill with these economical, easy-to-use WOLFE Liners . . . made of sturdiest materials . . . using tough papers scientifically waterproofed. Laboratory-tested for stability. In 3 standard styles for inside or outside use . . . flat style, automatic opening style, top sheet style . . . all sizes. Write today concerning WOLFE Waterproof Liners, special types of waterproof covers and liners, or for information on other special packing problems. Representatives in all principal cities. Robert F. Wolfe Company, Fremont, Ohio.

WAR PROVED

WOLFE *Waterproof* LINERS



water · moisture · dampness

everywhere

yet material "bone dry" because packaged

in acme moisture vapor barrier

— VALLEY 2A —

ARMY E NAVY

acme backing corp.

meadow and bogart sts. • brooklyn 6, n. y.

HAVE you a difficult job for Acme Barrier — the most efficient laminated foil packaging cloth devised?

Perhaps your packaging needs a build-up to insure inspection tiptopness when your product is unwrapped months and months later anywhere in the world. That is the performance record which our technical staff can duplicate for you as successfully as it did for the armed forces.

No obligation is involved if you want to check on Acme Barrier and its usefulness to you.

RECONVERSION

There's reconversion going on in the home too. Many a full-time war worker is now a full-time home maker. Her work in the kitchen is going to be made more pleasant and easier by the use of your products packed in glass. She will remember how in wartime the easy selectivity of glass-packed goodness solved many a problem. Now, with more products to choose from, H-A containers will bring more help to her than ever—and more sales to you.

HAZEL-ATLAS GLASS COMPANY, Wheeling, West Va.

SYLVANIA means Cellophane

and *that* means Protection!

A PACKAGE should be more than attractive. It must possess important functional qualities if the product is to reach the consumer with its freshness intact.

Sylvania Cellophane possesses these functional qualities. It is *more* than a glistening wrap. Sylvania Cellophane guards against dust, air and moisture . . . assures retention of flavor freshness.

Today Sylvania offers *finer* cellophane than ever before—cellophane that will mean better protection for a wider variety of products in the coming months.

SYLVANIA CELLOPHANE

Made only by SYLVANIA INDUSTRIAL Corporation

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd St., New York 17, N.Y. ★ *Plant and Principal Office:* Fredericksburg, Va.

SYLVANIA CELLOPHANE

• Registered Trade Mark

BRUSH UP" ON YOUR SALES

with the correct display container

Results have proven the immense sales value of an attractive display container. It is invariably accorded first place on the counter from which vantage point sales resistance is quickly overcome. » Our creative art department is at your service. Let them help make every package and display container your "silent salesman".

BROOKS & PORTER
INCORPORATED
304 HUDSON ST., NEW YORK

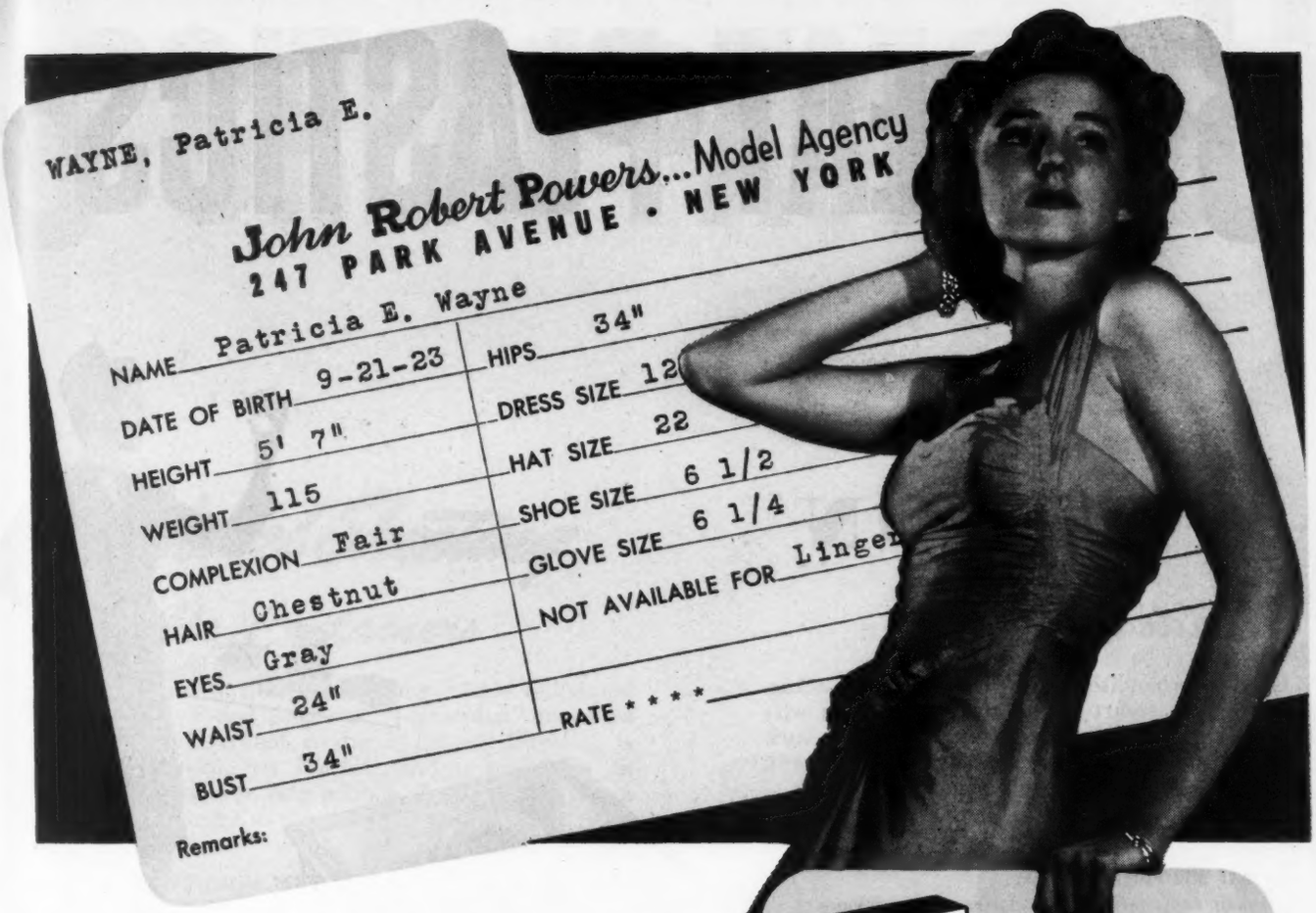
"Yes sir, that's Harris Tweed!"

On the islands of Lewis and Harris, in the bleak Outer Hebrides, the cottagers are busily spinning yarn . . . thick warm yarn made from the wool of the native sheep. The yarn is left in its natural shades, or colored by vegetable dyes cooked over peat fires. Then it is woven by hand into a durable cloth of rugged texture, which has the distinctive smell of heather when it is warm and moist. Yes, that's genuine Harris Tweed. This trade-mark, stamped right on every piece of the cloth by the British Government, is what millions of people look for when they want the best in tweeds.

Carr-Lowrey is the name to look for in the field of glass containers. For over half a century, our constant ideal has been "superior quality" . . . the making of the very best glass for the modern packager. Strict adherence to this principle has won for us the confidence and acceptance of a majority of the discriminating users of glass containers.

Factory and Main Office: BALTIMORE, MD.
New York Office: 500 Fifth Avenue
Chicago Office: 1502 Merchandise Mart

CARR-LOWREY GLASS CO.



custom-built for . . .

IDENTITY!

Distinctive product identity is your assurance of more sales — better sales. In no other container can you so easily enhance your product and protect your good name as in set-up boxes . . . these sturdy, custom-built containers give added value — they're your best bet for product protection, downright sales appeal, speedier line packaging, greater service, and ultimate economy. More of the better products are in set-up boxes.

NATIONAL PAPER BOX MANUFACTURERS Association

AND COOPERATING SUPPLIERS

FOR INFORMATION OR SERVICE • CONSULT THE NEAREST SET-UP BOX MANUFACTURER

3 GREAT PLASTICS FOR 3

STYRON

Molded Beauty

Good merchandisers know that brilliant packaging makes smart goods smarter. That's why Styron (Dow Polystyrene) stands out in such places as jewelry and cosmetic counters. Styron containers are bright and sparkling. They lend added appeal, too, because they are designed for secondary uses.

PRESENT AND POTENTIAL USES:

Cosmetic and pharmaceutical boxes and containers of all types; funnels; bottles; closures; food handling equipment. Also used for other products, jewelry; advertising items; refrigerator parts; pens; pencils; chemical apparatus; lenses; decorative objects, trim and many other uses.

PROPERTIES AND ADVANTAGES:

Beautiful, clear, translucent or opaque; resistant to acids and alkalies; stable at low temperatures; broad color range; low specific gravity providing more moldings per pound; low water absorption, good dimensional stability.

Saran film

Method II Packaging

Certainly, fine machined products, precision instruments, electric motors, assemblies and metal parts deserve the utmost protection—in transit and in stock rooms. Saran Film proved in war that it "keeps moisture in its place." In Method II Packaging it fully protects metal products, delivers them dry and clean, free from rust and corrosion.

PRESENT AND POTENTIAL USES:

Dehydrated packages for metal parts and assemblies, corrosive and anhydrous chemicals; bottle closure liners; flexible containers requiring moisture vapor imperviousness, etc.; shows promise as visual sales aid of exceptional merit.

PROPERTIES AND ADVANTAGES:

Highest degree protection against moisture and vapor transmission; soft, pliable, yet tough and strong; corrosion and chemical resistant; clear, transparent film; possesses exceptional flexural strength.

3 GREAT PACKAGES

Ethocel Sheeting

Flexible Containers

Clear and light, Ethocel Sheeting builds individual show windows that send out "I-want-that" messages for a host of favored products. Ethocel Sheeting is rigid and tough, yet flexible. And it maintains its characteristics over long periods of time, serving as a constant reminder to the buyer that good things come in good packages.

PRESENT AND POTENTIAL USES:

Containers of all types, sizes, and shapes for jewelry, cosmetics, and other products. Also used for displays, advertising novelties, greeting cards, envelopes, labels, decalcomanias, records, electrical insulating tape, ice cube trays, lighting fixture covers, lamp shades, and similar products.

PROPERTIES AND ADVANTAGES:

Combines toughness with flexibility; tensile strength 10,000 lbs. per sq. in.; elongation, 30%; bursting strength (Mullen), 48; folding endurance (1Kg.; M.I.T.), 4000. Retains these characteristics and transparency over long periods despite handling. Resistant to alkalies and grease. Withstands heat to 220° F. continuous; to 275° F. intermittent. Resists cold. Easily fabricated by drawing, folding and scoring. Can be beaded and printed and also joined by adhesives.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St Louis • Houston • San Francisco • Los Angeles • Seattle

DOW

PLASTICS

FOR BETTER PACKAGING:

STYRON • SARAN FILM • ETHOCEL SHEETING

SAVE OVER 75% IN WRAPPING LABOR!

That's real packaging economy—for in many prominent candy manufacturing plants and bakeries, using Wrap-O-Matic, 5 out of every 6 girls on the packing line are now only shadows of the past . . . a savings of over 75% in Wrapping labor costs. Wrap-O-Matic also saves up to 35% in Wrapping material costs . . . operates at high speed (up to 120 units per minute) using any type wrapper that can be printed in rolls, and gives extra sales appeal to your product. Shape and texture are no obstacle, for Wrap-O-Matic wraps soft or irregular shaped bars and biscuits with ease.

Plan now to streamline your wrapping operations. Write for our new illustrated brochure and more complete details.

For wrapping candy bars, biscuits, and cookies, Wrap-O-Matic is the most popular Wrapping machine in the Confectionery and Bakery field . . . a real tribute to the flawless wrapping by Wrap-O-Matic.

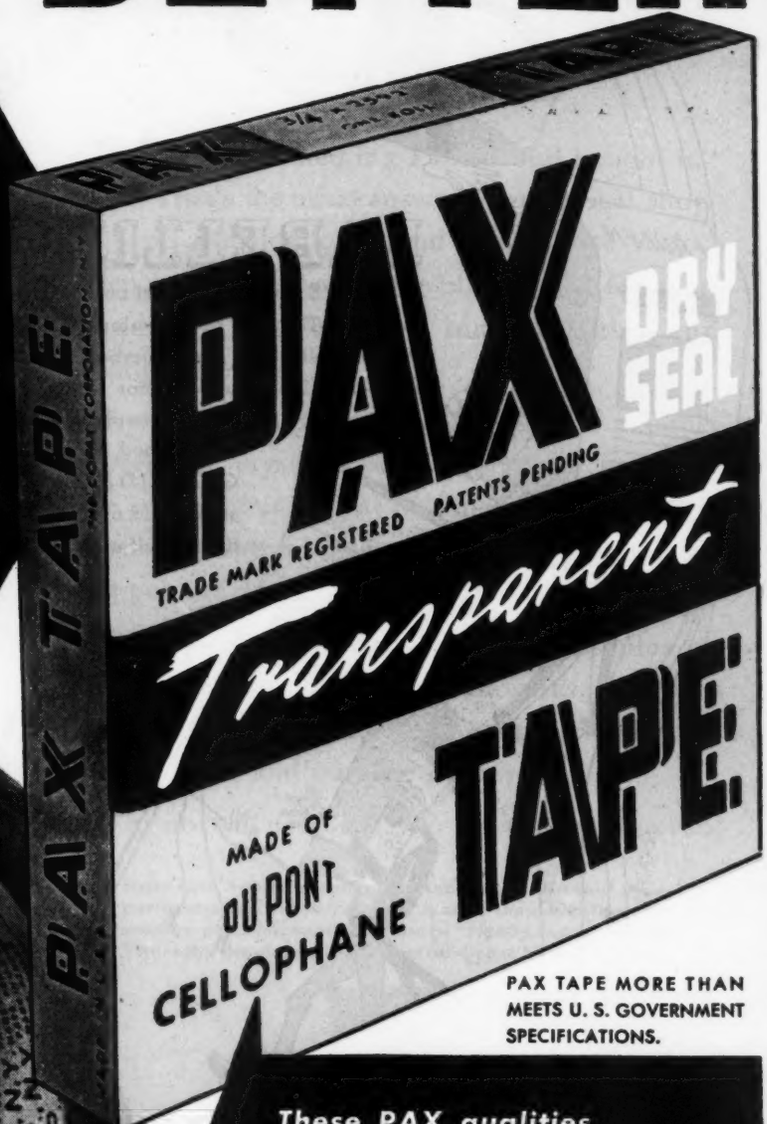
WRAP-O-MATIC Lynch DIVISION

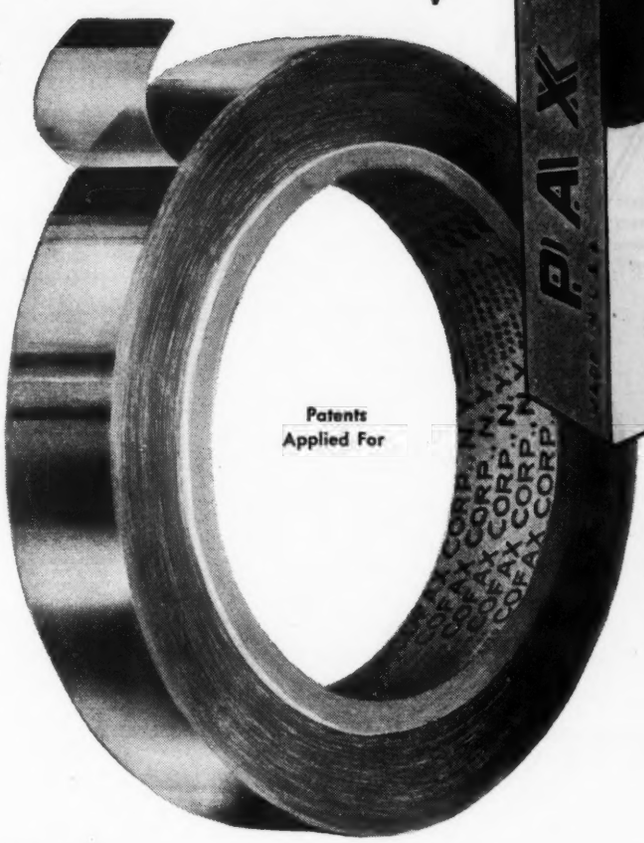
Manufacturing Corporation, Defiance, Ohio U. S. A.

NEW and BETTER

PAX TAPE marks a distinct advance in pressure sensitive tape. Test and use prove it a superior product.

PAX superiority in performance is due directly to the new formula and the original process by which it is made.





PAX TAPE MORE THAN MEETS U. S. GOVERNMENT SPECIFICATIONS.

These PAX qualities challenge comparison:

- Has greater tensile strength
- Gives stronger adhesion
- Edges always remain dry
- Rolls never telescope
- Lasts longer; keeps indefinitely
- Need not be stored in metal boxes

NOW AVAILABLE IN LARGE RANGE OF COLORS

A product of

THE COFAX CORPORATION NEW YORK OFFICE: 50 EAST 42ND STREET, NEW YORK 17, N. Y.

FROZEN
FROZEN FOOD
LABELLING . . . The ideal labelling ADHESIVE has the greatest possible latitude in the surfaces which it can combine. Through the development of our GLU-WELD ADHESIVES we can now offer the *least* number of ADHESIVES to perform the *largest* number of labelling jobs. For instance, a single one of our ADHESIVES will accomplish bench labelling to a variety of papers, glass, wood, tin, and fibreboard. An added feature of our GLU-WELD ADHESIVES is their high resistance to water, steam, and other factors that lessen the effectiveness of ordinary bonding agents.
UPACO ON PARADE

GLU-WELD WATER-RESISTANT ADHESIVES • FLEXIBLE GLUES • STRIPPING GLUES • TRANSPARENT FILM ADHESIVES • FOLDING BOX ADHESIVES

UPACO

UNION PASTE COMPANY

QUALITY ADHESIVES SINCE 1866

1605 HYDE PARK AVENUE - HYDE PARK, MASS.

UPACO

CASE, BAG AND CARTON SEALING GLUES • LABELLING ADHESIVES • LAMINATING ADHESIVES FOR FILMS, PAPERS AND CLOTHS

Merchandising Tips--No. 6

To turn "casuals" into customers—show your wares!

"OH, I *saw* something I liked, and bought it." That's the usual answer of the casual shopper who went to look—and came home with a dozen packages. And it's a big tip too, for merchandisers who want to increase sales and broaden markets.

If *you* want these extra sales, let your product *be seen*—in crystal-clear, inviting Anchorglass! The eye and buy appeal of almost any product is far more powerful when it's revealed—when the shopper can actually *see* what she's buying!

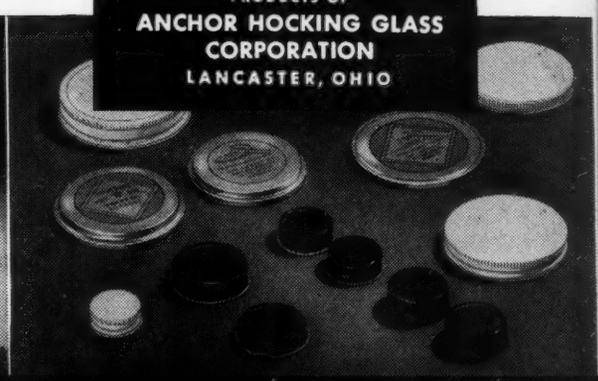
Light, strong Anchorglass containers plus attractive, easy-to-use Anchor Closures will help your product sell faster, protect it perfectly, and keep it fresh and pure to the last bit.

Why not call us in today to show what we mean!

Hear how Anchor Hocking is educating millions of your customers and retailers every week to the advantages of modern glass packaging—Tune in "Hobby Lobby" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO



IS IT SMART AND CORRECT OR OLD-HAT?

Character of product is a quality that starts in shrewd package design. The features of good foods, drugs, hardware, what-not, need dynamic display. A nice exterior will help sell any useful product.

Impressions of attractive good-taste and honest-value are worth striving for. With the right combination of color and layout, the choice of materials becomes most important. Have a look at proofs on Ridgelo Clay Coated Boxboard or compare your present package with one of Ridgelo Clay Coated Boxboard.

The reasons for this fine carton appearance are good boxmaking technique plus the silky-smooth uniformity of Clay Coating. Ridgelo makes any design look its best — last longest too. Try it!

Ridgelo
CLAY COATED
BOXBOARDS

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

Representatives: Bradner Smith and Company and Mac Sim Bar Paper Compdny, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

"The bigger the family—the better the service"

YOU can say that *twice* about a big, smooth-running family like Continental's! It's bigger now and more efficient than ever.

We touch nearly every phase of packaging now. That's why, after careful analysis of your problem, we feel sure we can offer the perfect package for your product. Metal containers, liquid-tight paper cups and containers, fibre cans and drums, steel pails and heavy-duty containers—we make them all.

The armed forces get first call on our facilities now. But keep your eye on Continental! And on Continental's trademark, too! The Triple-C stands for *one* company with *one* policy—to give you only the very best in quality and service.

Tune in: "REPORT TO THE NATION" *every week over coast-to-coast CBS Network*

CONTINENTAL CAN COMPANY, INC.

CONTINENTAL PAPER DIVISION

FIBRE DRUMS The Container Co., Van Wert, Ohio

LIQUID-TIGHT FOOD CONTAINERS — Boothby Fibre Can Co. Roxbury, Mass.

PAPER CUPS AND FOOD CONTAINERS — Mono Containers Newark, N. J.

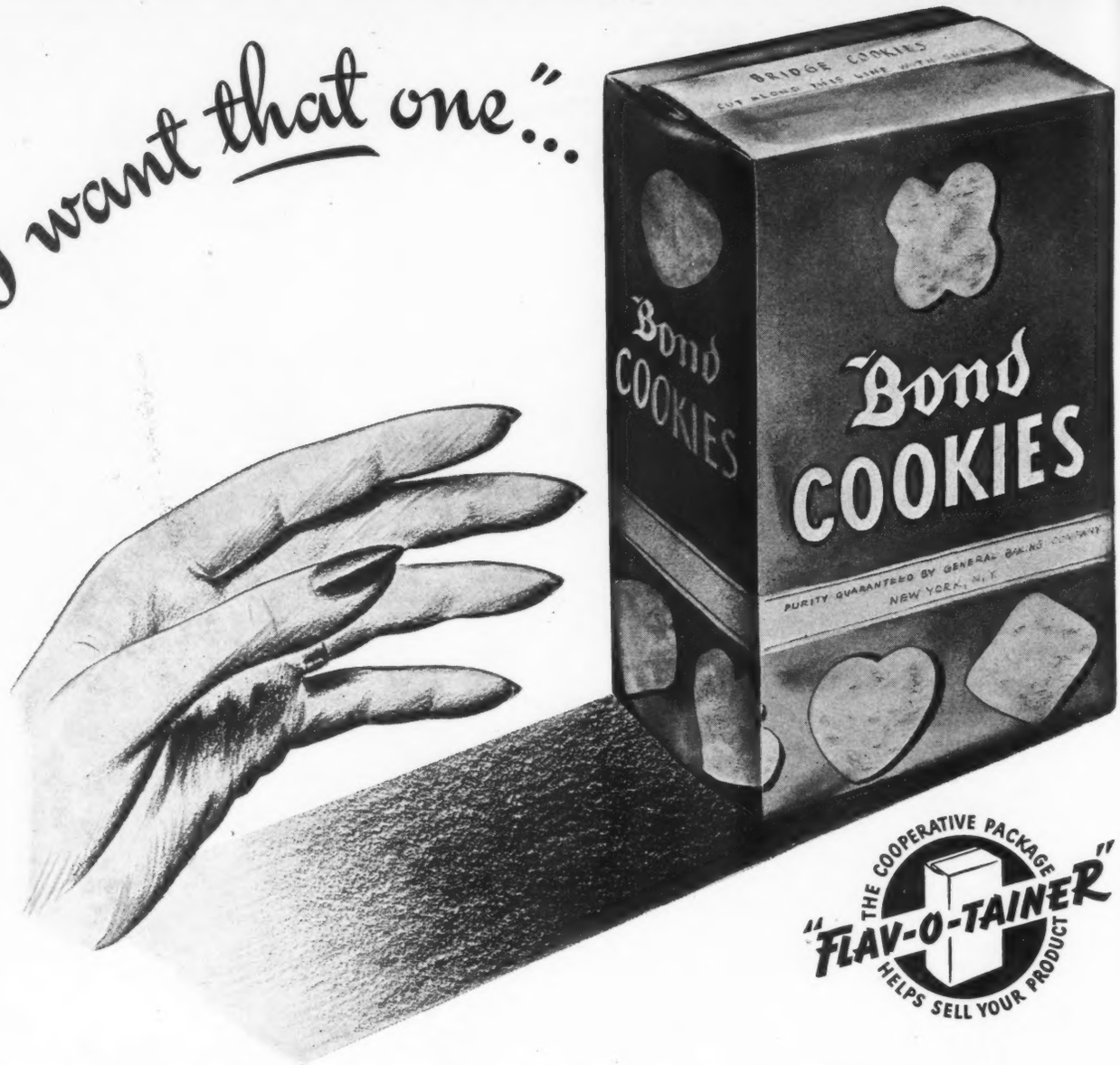
COMBINATION PAPER AND METAL CONTAINERS

Headquarters: 330 W. 42d St., New York 18, N. Y.

13 Plants — Sales offices in all principal cities

Continental Fibre Drums—Continental makes a full line of fibre drums, both the all-fibre and the metal-end types, for shipping chemical and pharmaceutical products. "FIBERPAK," illustrated, an all-fibre drum (from ¾ gal. to 67 gal. capacity), and "LEVERPAK" (from 12 gal. to 75 gal. capacity), for finer chemicals and similar expensive materials; "STAPAK" Drums (from 2 gal. to 32 gal. capacity) for less costly materials such as soap powders, cleansers, colors, detergents. Wide selection of linings, coatings, treatments and constructions to meet specific requirements.

"I want that one"...



Sure she wants that one—she's had those cookies before, so she knows from experience how *well protected* they were in their FLAV-O-TAINER package.

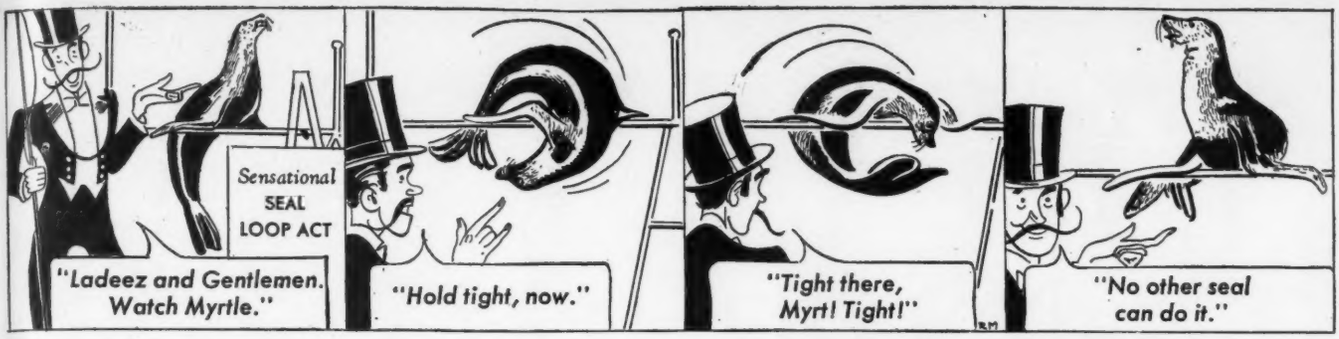
Women may not know all the ins and outs of modern packaging but they do know fresh merchandise when they see it—and that's why thousands of them show a decided preference for products packed in this patented duplex bag that is heat sealed on all seams. FLAV-O-TAINER *is* a cooperative package—it does help you sell because it provides dependable protection against air, moisture, grease and odors.

"FLAV-O-TAINER" will soon be available in the following Royalflex films: Selloflex (Cellophane laminated to itself or to other material); Lumiflex (aluminum foil laminated to other material); Plioflex (Pliofilm laminated to itself or to other material); Duoflex (moisture-proof coated glassine laminated to itself).

Whatever your packaging problem, we'll be glad to help you solve it—and the time for a preliminary talk is NOW.

THOMAS M. ROYAL & COMPANY • *Philadelphia 20*

BOSTON • CHICAGO • SAN FRANCISCO • BEAUMONT • ATLANTA • PITTSBURGH • NEW ORLEANS
DENVER • SEATTLE • NEW YORK • ST. LOUIS • DAYTON • DETROIT • SYRACUSE • BRYN MAWR

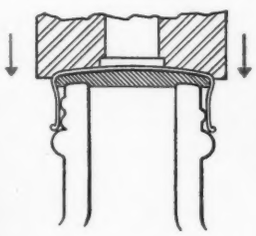


Do your seals hold tight ALL AROUND ?

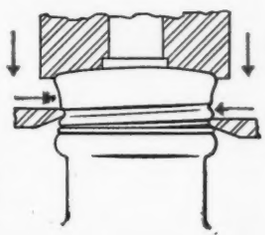
Alseco Seals are "Rolled-On" *a-r-o-u-n-d* every thread on each individual bottle, tailor-made to assure a tight-sealing cap that reduces leakers and breathers. The liner is compressed uniformly all around the entire glass surface.

R-O Seals are automatically applied by Alseco Machines at speeds up to 300 per minute. And the caps themselves are inexpensive. The whole story is a low-cost operation. Write us today for complete data.

WHY ALSECO R-O SEALS SEAL BETTER



1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, container lip is embedded in cap liner evenly all around, effecting the seal.



2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailormade, fits perfectly, seals tighter.

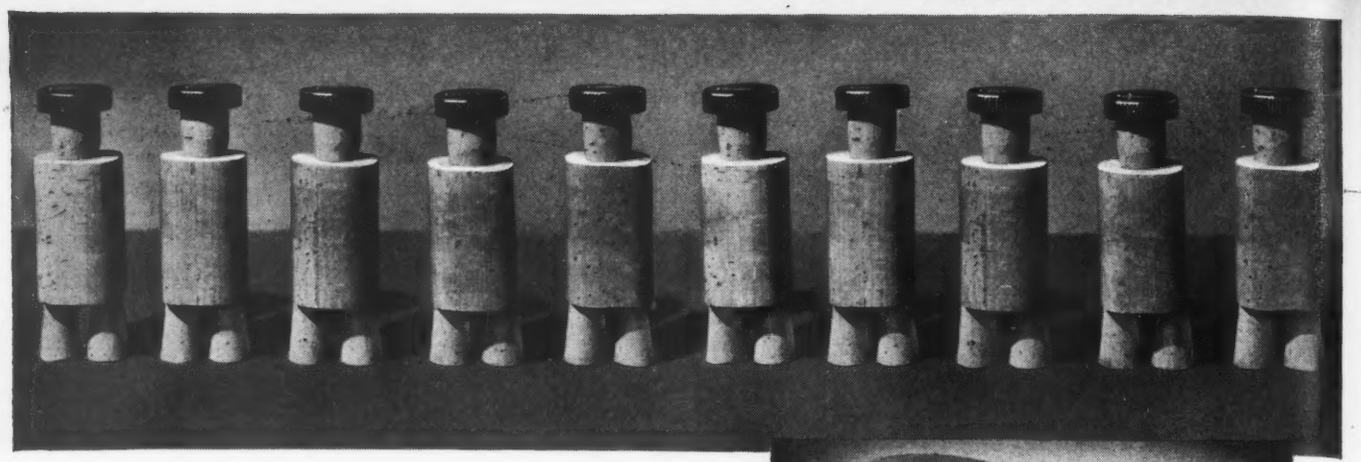
ALSECO

TAILOR-MADE OF ALCOA ALUMINUM

SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY · 1345 THIRD AVENUE · NEW KENSINGTON, PENNSYLVANIA

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA



CORK GUARDS—

your Bottled Products

There's nothing like the dependable sealing of a good cork. Cork has been Mundet's specialized business for 80 years. The reliable sealing of Mundet Corks is due to experienced selection of the raw material, grading and processing. Even after expert grading of the raw cork, and selection of the best grades for stoppers, the finished corks are checked by sorters, carefully trained in this work, in a final grading of cork stopper quality.

Because of the original high quality of the raw material, Mundet Corks remain lively and resilient, do not "set" or crumble. Mundet representatives are conveniently located for helpful personal and material service. Mundet Cork Corporation, Closure Division, 65 S. 11th St., Brooklyn 11, N. Y.

FOR DEPENDABLE SEALING, USE

MUNDET
CORK CLOSURES

It's Western FOR PLASTICS AND PACKAGES

Creators of new and unusual forms in low pressure laminated plastics.

Converters and designers of packaging materials including laminated and coated metal foils, transparent films, fabrics and paper.

Western combines scientific research and development with practical knowledge and experience to supply you with products that sell!

Western Products, Inc.

NEWARK, OHIO

STRONG..
AS A RODEO STEER

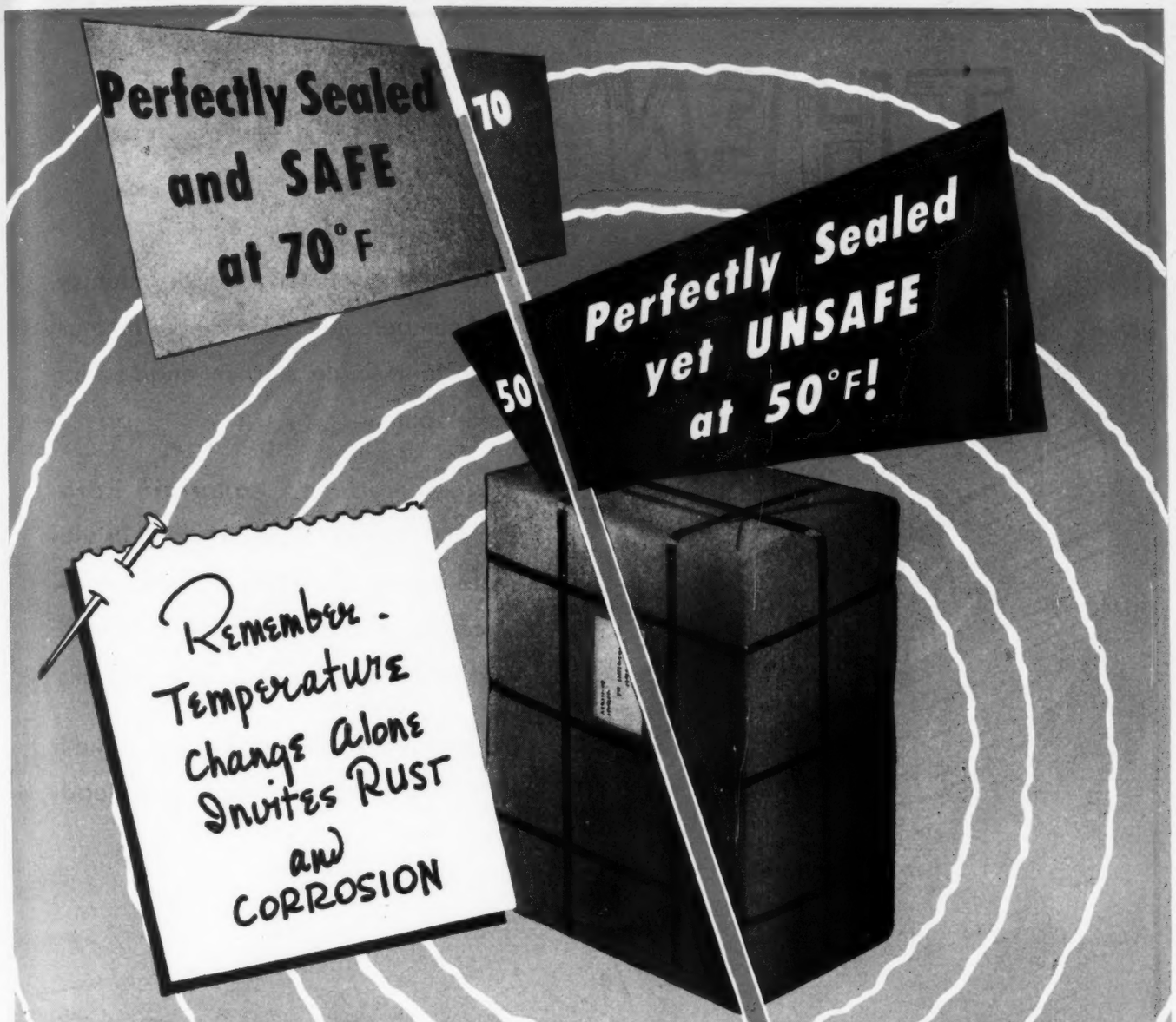
LONG LIVED..
LIKE A REDWOOD TREE

STRENGTH . . LONG LIFE . . are essentials in the collapsible tubes you specify. Like a bucking rodeo steer, tough strength is bred into the metal from which SHEFFALLOY Tubes are made. Exclusive methods of melting, mixing and tempering tube metals give you a dependable extra measure of pliable, uniform strength. You can depend upon these tubes, too, to serve until the last final squeeze uses all the contents. Everyone is familiar with the rare endurance of California Redwoods, living on for generations after less hardy neighbors have gone to decay. In a similiar sense, SHEFFALLOY Collapsible Tubes have that extra strength and endurance needed to keep on serving and protecting a product under the severest kind of usage. Make us headquarters for ALL your collapsible tube needs. Write or phone our nearest office, today, for our recommendations on your tube packaging problems and requirements. Samples, ideas, suggestions without obligation.

Sheffalloy
TRADE MARK REGISTERED
SHEFFIELD PROCESS
TUBES

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 S. CANAL STREET, CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, V. P., 500 FIFTH AVENUE, NEW YORK 18
THE WILCO COMPANY, 6800 McKINLEY AVE., LOS ANGELES 1


Perfectly Sealed and SAFE at 70° F
70
Perfectly Sealed yet UNSAFE at 50° F!
50
Remember - Temperature Change Alone Invites RUST and CORROSION

Play Safe—Insure Factory-Fresh Arrival with STERLING GEL

SIMPLIFIED PROCESSING REDUCES COSTS

Due to improved processing facilities and simplified methods of application in packaging, high quality Sterling Silica Gel can now be used for peacetime shipping and storage at a new low cost. Packed in containers to meet the requirements of all types of users. Meets and exceeds government specifications.

Moistureproofing the outside of a container doesn't always protect the merchandise on the inside. Since relative humidity increases as air temperature decreases, air within a container, that is safe at 70° F., may release corrosive moisture with even a slight drop in temperature. To do the complete job of protecting against rust, corrosion and mildew—use Sterling Gel inside the container. Sterling Gel, a superior Silica Gel dehydrating agent, used as recommended, adsorbs all excess moisture safeguarding contents under extreme conditions for indefinite periods. A wise investment for shippers, Sterling Gel also protects instruments and parts in storage.

STERLING GEL

Inquiries invited from Sales Agents and Distributors

STERLING SILICA GEL COMPANY • STERLING, ILLINOIS

THEN and NOW-

The first wheel—crude, clumsy, and cumbersome — signalled the most important single step in engineering development.

Today, modern Champlain Rotogravure carries this principle to its ultimate perfection, making possible new excellence in printing performance and new economies in production costs.

If you have a printing problem, take it up with the folks at Rotogravure Headquarters.

CHAMPLAIN ROTOGRAVURE

CHAMPLAIN
STANDARD ROTOGRAVURE

CHAMPLAIN COMPANY, INC. • 636 ELEVENTH AVENUE, NEW YORK 19, N. Y.

Symbol of

DISTINCTIVE *Packaging*

GAYLORD CONTAINER CORPORATION

General Offices: SAINT LOUIS

CORRUGATED AND SOLID FIBRE BOXES — FOLDING CARTONS

KRAFT GROCERY BAGS AND SACKS — KRAFT PAPER AND SPECIALTIES

New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City
Seattle • Indianapolis • Houston • Los Angeles • Oakland • Minneapolis
Dallas • Jacksonville • Columbus • Fort Worth • Tampa • Cincinnati
Detroit • Des Moines • Oklahoma City • Greenville • Portland • St. Louis
Memphis • San Antonio • Kansas City • Milwaukee • Chattanooga • Bogalusa
Weslaco • New Haven • Appleton • Hickory • Greensboro

CONTINENTAL PAPER COMPANY

Manufacturers of

QUALITY PAPER BOX BOARDS

at

RIDGEFIELD PARK, NEW JERSEY

Wishes To Announce

A Subsidiary

ALFORD CARTONS

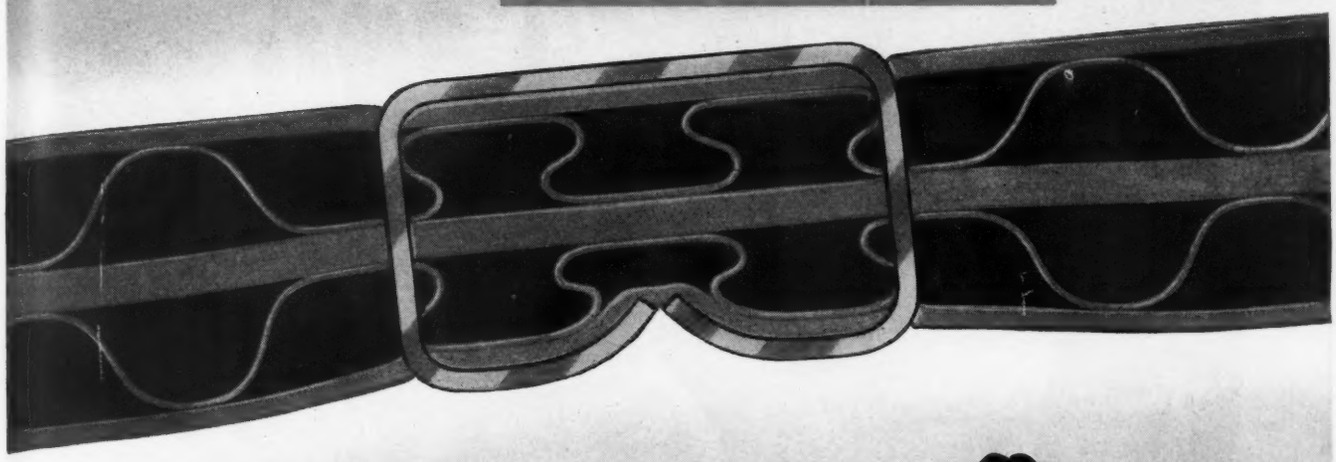
Which Will Produce

QUALITY FOLDING CARTONS

In Its New Plant

Now Under Construction

Save money by STITCHING the MORRISON Way



YOU can save money—and time—in closing your corrugated and solid fibre containers by using Morrison wire stitching machines. These rugged, speedy, heavy-duty stitchers give you neat appearing, strong, pilfer-proof cartons, even when operated by inexperienced help. The machines do all the work . . . cutting, forming, driving and clinching the wire in one instantaneous operation. A cost analysis for closing your cartons will be sent you, without obligation, if you will merely fill in and mail the coupon below.

MORRISON
STITCHING MACHINES

SEYBOLD DIVISION

HARRIS-SEYBOLD-POTTER COMPANY, DAYTON F7, OHIO

Note: We also manufacture a complete line of book, steel, metal and aircraft stitchers. Sales and Service Representatives in all principal cities in the United States and Canada.

ARMY E NAVY

HARRIS-SEYBOLD-POTTER COMPANY, Dept. P-105
819 Washington Street, Dayton, F-7, Ohio.

We use Tape_____ Glue_____ Tape and Glue_____ Staples_____

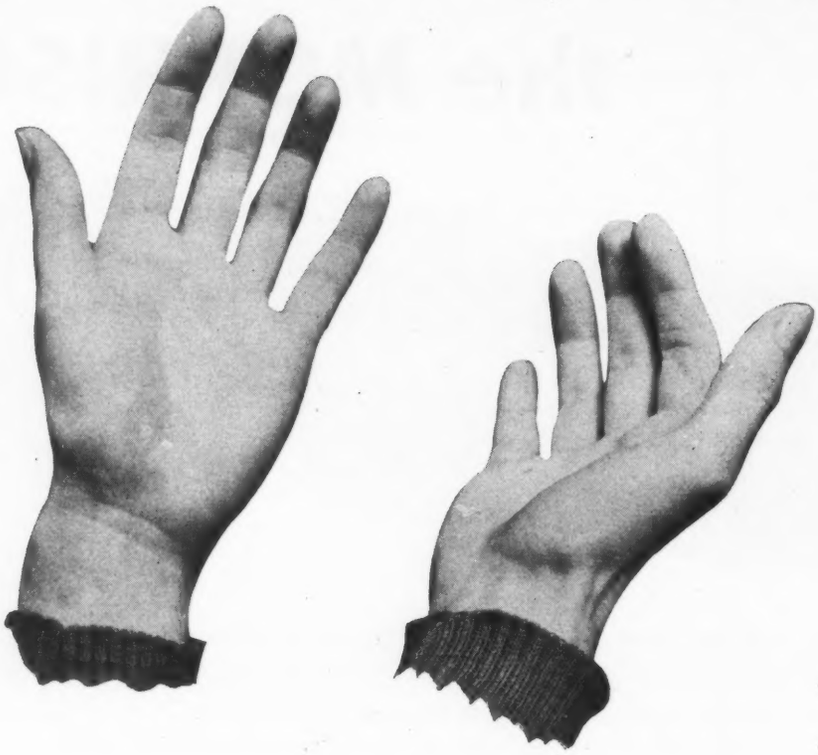
Average carton size used_____ One_____ or three_____ strips per end

Number of staples per carton_____ Approximate number of cartons per year_____

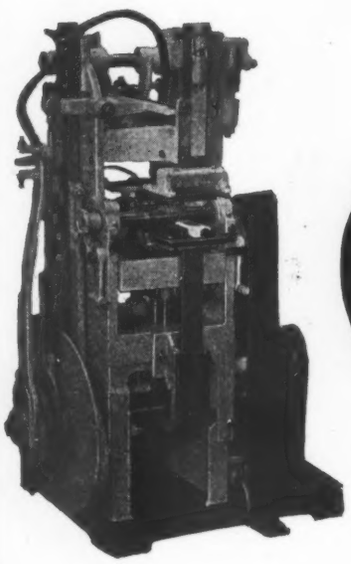
Company .....

City and State .....

Attention Mr. .....



Only ONE PAIR OF HANDS needed in LABELRITE* labeling



NO "RE-POSITIONING"—NO "WIPING EXCESS GLUE"

PERFECT REGISTER
50 or more per minute
SELF-CLEANING FEATURE

With personnel problems mounting, here is the answer to your Labeling problem . . . *An entire labeling line,* assigned to ONE unskilled pair of hands; *a single employee!* Or none at all, if your volume warrants a fully Automatic LABELRITE. Minimum time for "change-overs" if you run more than one size, and change parts at "petty-cash" costs. LABELRITES are the best bet in Labeling since 1937! Want Catalog details?

*Reg. U. S. Pat. Off.

Get FACTS—and you'll get LABELRITES*

NEW JERSEY MACHINE corporation

325 W. HURON ST.
CHICAGO 10, ILL.

1701 CAREW TOWER
CINCINNATI, OHIO

1600 Willow Ave., HOBOKEN, N. J.

Lithographed by

FORBES

NEW YORK CLEVELAND LITHOGRAPH CO. CHICAGO ROCHESTER

P. O. Box 513 Boston 2

JAR CLOSURES! IMMEDIATE DELIVERY!

A diversity of colors, styles and sizes including standard 33, 38, 43, 45, 48, 51, 53, 58, 63, 70, 83 and 100 mm.

They're here! Plastic molded jar closures are now in full production . . . and at a lowered price scale! New MACK MOLDING automatic set-ups permit greater production economies and efficiencies.

They're good! Plastic molded closures combine rigidity and strength with smart lustrous eye-appeal. They are sanitary, non-corrosive and easily cleaned.

They're accepted! Easily removed, easily replaced—just ask the customer. Write, wire or telephone us about your requirements; your inquiries will be treated in confidence.

If you are not already acquainted with the facilities offered by our three complete and up-to-date plants, the new 8 page booklet "MACK MOLDED EXCELLENCE" will be sent on request. Write for your copy today.

MACK MOLDING COMPANY
INCORPORATED
160 MAIN STREET, WAYNE, NEW JERSEY

Mack
MOLDED
EXCELLENCE

SALES OFFICES: NEW YORK CITY, CHICAGO, DETROIT, INDIANAPOLIS, BOSTON & ST. LOUIS

A HEMINWAY PACKAGE

reflects the distinction of your product

A fine product deserves a distinctive package. 75 years of designing and manufacturing packages for America's finest products has evolved a completely rounded packaging service. We can serve you with:

Paper Canisters • Paper Drawn Products • Catalogue Printing • Set-Up Boxes Round Boxes • Novelty Boxes

HEMINWAY

Heminway Corporation

(formerly Waterbury Paper Box Co.)

New York Sales Office, 30 Rockefeller Plaza, N. Y. 20

Waterbury, Connecticut

GUARD *YOUR* PRODUCT

AGAINST THE WATER VAPOR* OF

ORDINARY AIR

SAFE: Protek-Sorb silica gel assures a dry non-corrosive atmosphere within the moisture vapor proof barriered package . . . barriers alone cannot assure this SAFETY. Many types of barriers, in addition to metal containers, are available.

Moisture damage—rust, corrosion, mildew and mold—is not confined to the tropics or the far places of the world. **It presents a hazard everywhere.** *Ordinary air carries water and whenever the relative humidity exceeds 30 per cent, moisture damage results. The average relative humidity in practically every industrial section of the U. S. is well above 30%. **Davison Dehydrated Packaging, using Protek-Sorb† silica gel, banishes this ever present danger of moisture damage.**

Davison Packaging Service offers custom-designed protection for **your** specific product. We can show **your** packaging engineers how to adapt previous specifications to modern economical practice—retaining SAFETY and adding merchandising and sales appeal. Davison Dehydrated Packaging assures the ultimate consumer receiving **your** product factory fresh, clean (no messy grease to remove and no tampering with adjustments) and ready for immediate use. This protection is **NOT** expensive—consult Davison field engineers regarding **YOUR** packaging.

THE DAVISON CHEMICAL CORPORATION

BALTIMORE 3, MARYLAND

Progress through Chemistry

© 1945 T.D.C.C.

† Reg. U. S. Pat. Off

Canadian Exclusive Sales Agents for PROTEK-SORB silica gel • CANADIAN INDUSTRIES LIMITED • General Chemicals Division

HOW TO PACKAGE A *Prima Donna*

If you don't happen to have a temperamental product you know someone who has. It has to be coddled in one way or another.

Maybe it is the sly, evasive type always sifting out of the corners. Maybe it needs special spotlighting—with a window type carton. Or perhaps it's the type that's always thirsty, absorbing more moisture than is good for it.

PLANNED PACKAGING knows how to deal with "Prima Donna products". Sift-proof cartons in one case; window cartons for another; Aqua-seal for the product that must keep moisture in or out; grease proof cartons for still another group.

Our complete facilities for making boxboard, testing, designing and converting, give us a special advantage in meeting the wide range of requirements found in a wide variety of products.

THE OHIO BOXBOARD CO.

RITTMAN, OHIO

Manufacturers of paper board, folding boxes, corrugated and fiber shipping containers, and converted specialties

SALES OFFICES: RITTMAN • AKRON • CLEVELAND • CINCINNATI • PITTSBURGH • NEW YORK • CHICAGO

Capacity 500 tons daily

Our salesmen feel frustrated **... and why shouldn't they? What salesman likes to be told that new customers will only make him unpopular?**

Unfortunately, Walter P. Miller Company is unable to accommodate new customers at this time. Even though the war is over, our full facilities are needed for our responsibilities to present customers. How long our salesmen must remain in their present unhappy plight we do not know, but . . .

Until conditions change, Walter P. Miller Company's efforts must be confined to serving established customers . . . with improving quality, as finer grades of stock become available . . . and with the creative ability and manufacturing efficiency which have earned for us a fifty-year-old reputation as "a good house with which to do business."

WALTER P. MILLER COMPANY, INC.

CREATORS AND PRODUCERS OF

Set-up Paper Boxes

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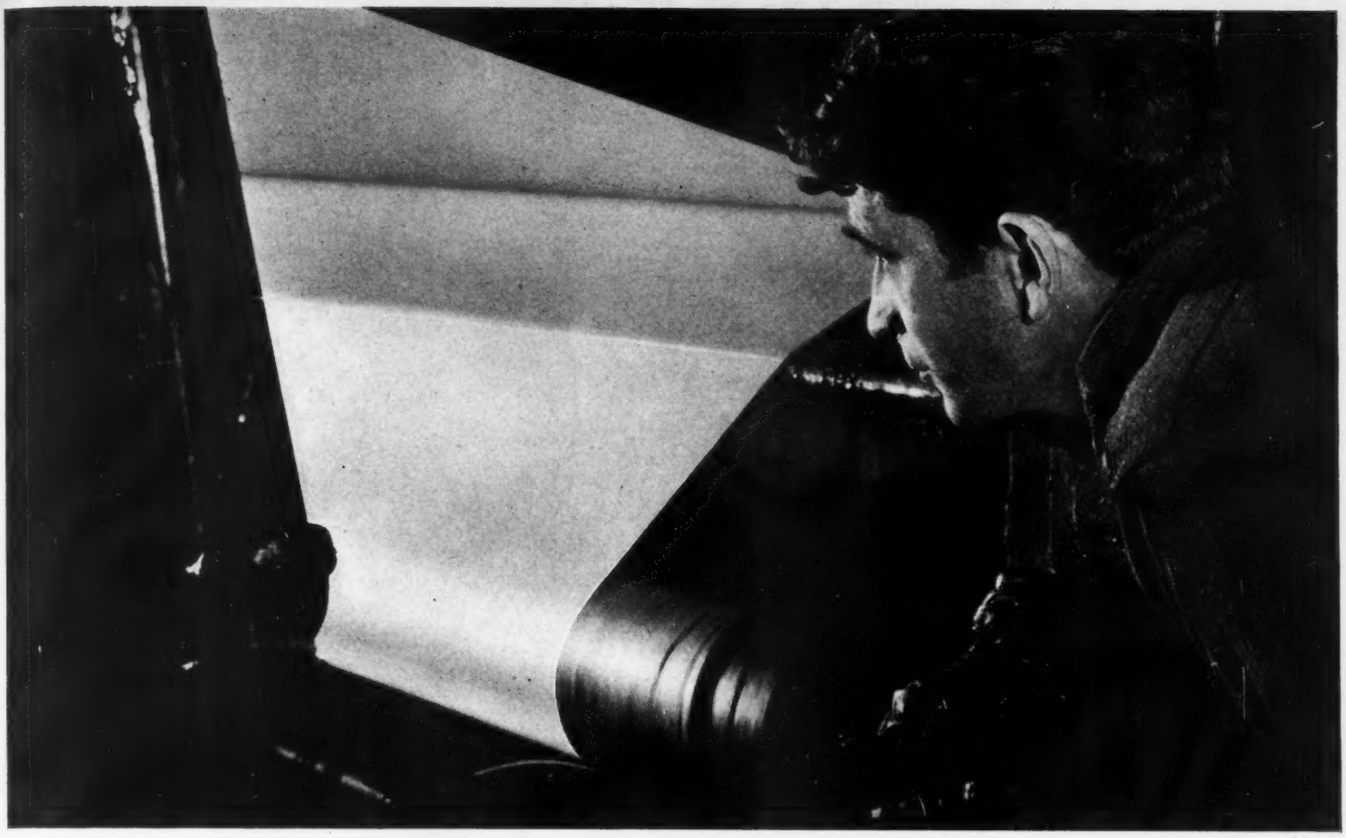

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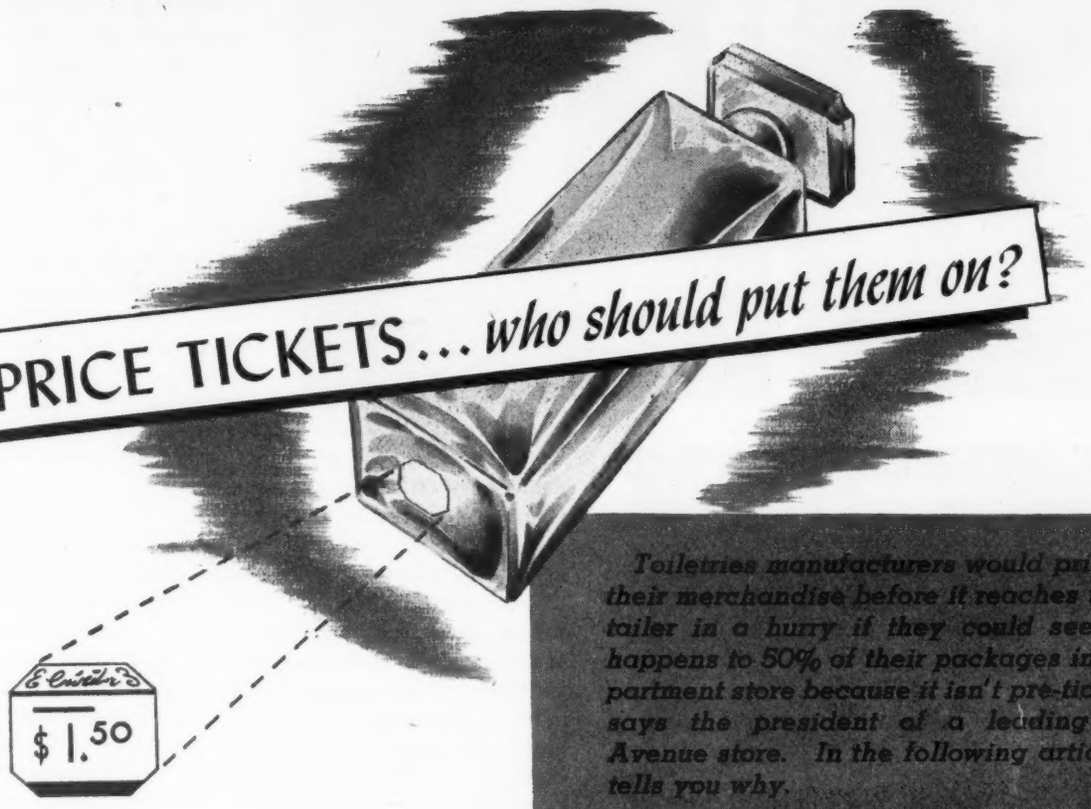
MODERN PACKAGING
VOLUME 19 NOVEMBER, 1945 NUMBER 3

PRICE TICKETS... who should put them on?



Toiletries manufacturers would price tag their merchandise before it reaches the retailer in a hurry if they could see what happens to 50% of their packages in a department store because it isn't pre-ticketed, says the president of a leading Fifth Avenue store. In the following article, he tells you why.

If the makers of price-fixed merchandise, such as perfumes, cosmetics and toiletries, could see the way 50% of their packages reach the public they wouldn't like it.

Most of this damage, marring, spoilage and theft of millions of the most beautiful packages on the market could be avoided by one simple practice . . . putting price tickets on the merchandise before it reaches the retailer.

All you'd have to do to convince them, says the president of a leading Fifth Avenue department store, who's pretty hepped on the subject, is to show them the stock room of any department store.

He thumbed through a copy of MODERN PACKAGING.

"More than ever," he said, "when you look through the pages of this magazine, you realize the endless time and thought and money spent on the design and production of those packages—and to what purpose when they take the beating they do, all because they have to be price-tagged when they reach a store."

Mr. X (he doesn't want his name mentioned; says everybody will think it is Bonwit Teller's anyway—but it isn't) was walking past the cosmetic counters of his store one day. What caught his eye were the grease pencil markings on the handsomely printed wrap of an expensive perfume package.

"What was the reason for slip-shod price tagging like this?" he asked. "And how would the purchaser of a $15 bottle of perfume like the smudge of an erasure of this marking when he bought that fine perfume for his wife's anniversary present?"

The reason was not found at the counter. It went far deeper than that, down into those basement areas the customer doesn't see where the stock is unloaded, priced and stacked.

Again, why was the grease pencil used? Why hadn't they at least put on one of the store's gummed priced tags?

"But look," Mr. X.—"look at the floor," said the stock clerk. "We tried all morning to get these darn things to stick—but they won't stick to that paper. They were calling for stock and there was nothing to do but use a grease pencil."

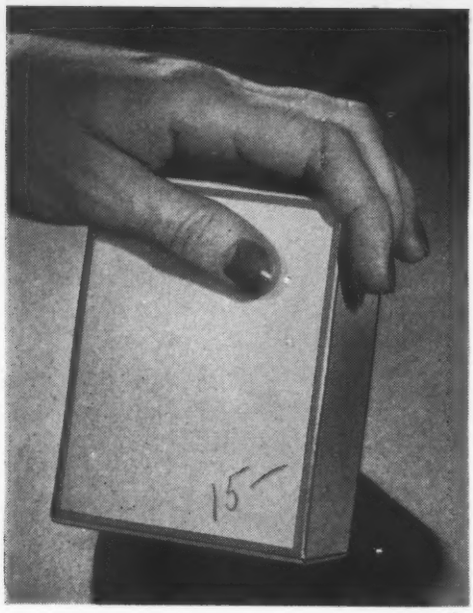
The floor was littered with those tiny price-tag labels that you get on purchases in department stores.

Mr. X went to the nearest telephone extension

"Get me purchasing!" he roared. Then—"Can't we get any price tags that will stick to Suzy Tatoo's *'L'affaire de coeur?'* " he shouted.

He stayed at the phone a long time listening. He apparently didn't like what he heard because he didn't look happy. He went back to where the stock was being unloaded. He walked through the shelves, specially built shelves to keep dust off of merchandise. He ran his finger over the shoulders of some bottles of facial lotions. He looked at his finger. It was black.

It was only September, but the Christmas stock was already crowding the shelves. More was coming in at the receiving



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1—Grease pencil markings like this, marring packages of $15 perfume, have started a store president on a lively campaign for price-ticketing by manufacturers. 2—No all-purpose adhesive will stick to every surface. Store price tickets must adhere to hundreds of surfaces. But they don't. Tickets fall off, cause price errors, leave smudges on the merchandise.

3—Stock must be removed from shipping cases to be price-ticketed—exposed in store stock rooms to dust, dirt and theft. All this damage and loss could be avoided if cases did not have to be opened in advance for price ticketing.

tables. What would it look like when it got to the selling floor, he thought—all those cartons, bottles, jars—already dirty—already price tags coming off—already cartons and boxes torn.

He went back to his office. He wrote a letter to the Toilet Goods Association. And that's where MODERN PACKAGING came in. We saw an account of his letter in the Association's bulletin. We asked Steve Mayhem, the Association's secretary, who the "leading merchant" was. He gave us his name. The merchant said he would be interviewed, but as previously stated preferred to be anonymous.

He told us the story of the stock rooms—why a store must start receiving its merchandise for the holiday season as early as September. There is considerable peak in toiletry selling at or about the holiday season. Retailers at that time find their facilities strained to the utmost. There is never enough help in a department store at Christmastime, even in normal times. In these times, with labor shortages, it's even worse. So far the easing of war production has had little effect on the availability of department store personnel. Moreover, there is not sufficient space in stock rooms to accommodate all the help that could be used if you had it. Accordingly, stores must prepare by placing price tags, in so far as possible, during the early fall.

Cases must, therefore, be opened and the individual items of merchandise are thus exposed to dirt and dust in the interval before they are placed on sale. In addition to damage, much of the merchandise is lost by theft. It is a simple matter for unscrupulous employees to make away with one or two expensive bottles of perfume after the cases are opened. These can be slipped easily into pockets or purses and nobody is the wiser for a while until too much is missed. It is impossible to keep track of everything—but it is amazing how much is lost by such thefts. Such merchandise—especially perfumes—finds its way into the cut-rate shops. There is big traffic in such business.

All of this could be stopped if the cases did not have to be opened before the individual packages were ready to be moved to the selling floor. If they were price-tagged by the manufacturer before they arrived at the store the cases would not have to be opened until that time.

Store labels are not usually in harmony with the attractive appearance of the containers and the work of the finest designers is deliberately marred by affixing store price tags. A point in case is the aforementioned grease pencil marking. The reason for this was the inability of making the store label stick to the particular surface of the package. Anybody knows that there are particular adhesives for every purpose but no one all-purpose adhesive that will adhere to every kind of a surface. Obviously, a store cannot have a price tag with an adhesive suitable for every type of package. In a toiletries department, alone, there are hundreds of different types of surfaces to which these labels must stick, including paper, glass, metal, wood, plastic, cellophane, to say nothing of the numerous variations of lacquers and other coatings and different types of printing processes which are used on such surfaces. Mr. X's store had the leading makers of adhesives studying this problem, but they finally gave up, because there just wasn't an adhesive that could be supplied for every purpose and no way to train help to distinguish a tag with one kind of adhesive from another. Tags with strings are

no help either. They either slip off or the strings get so tangled, the stock clerks and sales girls cannot untangle the merchandise. Even the best adhering ticket usually leaves a smudge that impairs the perfection of the package.

Pre-ticketing by manufacturer would insure the price tag harmonizing with the design on the package itself and of being on the portion of the package which the mannfacturer considered most suitable. Some companies have done a good job of pre-ticketing, but the practice is not general throughout the cosmetic industry, sometimes not even general throughout an entire line of goods. A good example cited in the confection field was that of a candy company which affixes a price tag to every package, which is easily removable when the package is to be used as a gift. Another example of successful pre-ticketing is that used by book publishers, who print the price on the inside front flap of the book jacket. All the sales person has to do, if the book is purchased as a gift, is to snip off the corner containing the price with a scissors; the customer receives the book without price mark—and usually a fresh book since it has not been handled for pricing.

Quite satisfactory and easily removable price tags can be secured so that the objection against price tagging gift merchandise would not be valid. The manufacturer also can use the correct adhesive suitable for the package material on which it is to be used, thus eliminating the problem of having the labels come off.

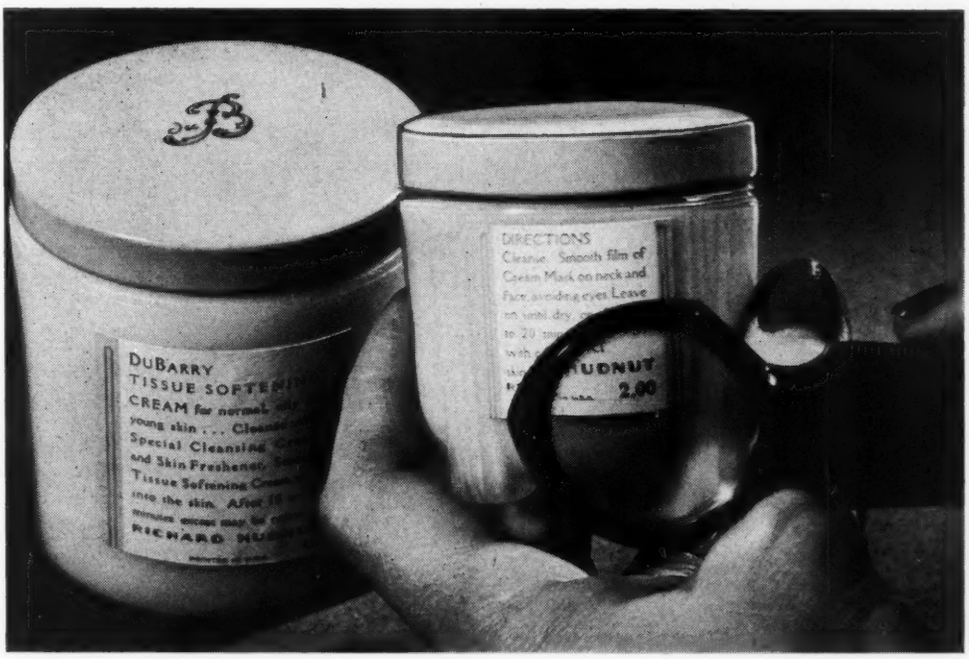
Errors in pricing that occur under conditions of ticketing in the retail stores would be avoided if the manufacturers affixed their own tags. Store losses in wrongly priced merchandise are considerable. This is understandable when you see how the ticketing is done. First chance for error is in the stock room, where the wrong price may be placed on an entire shipment. Usually this is discovered but it takes time and money to correct it. The inability of the tickets to adhere to the merchandise causes more errors. Green help on the sales floor, if they do not find a ticket, ask some other sales person the price of an item. If the person questioned does not know the stock, the item is often sold at the wrong price. If the price is lower than standard, the store takes the loss and doesn't worry too much, but if the price is high and in the store's favor—a $2.50 item sold for $3.50, for instance—they are quick to rectify it. "It doesn't take long for rumors to spread through the grapevine, you know, that so-and-so's store is selling a product a dollar higher than the others," said Mr. X.

The cause of fair trade, this merchant believes, would undoubtedly be advanced through pre-ticketing by the manufacturers. There would be less chance for marking above or marking below list price and manufacturers would have a better check on whether the price was being maintained for products in the retail outlets.

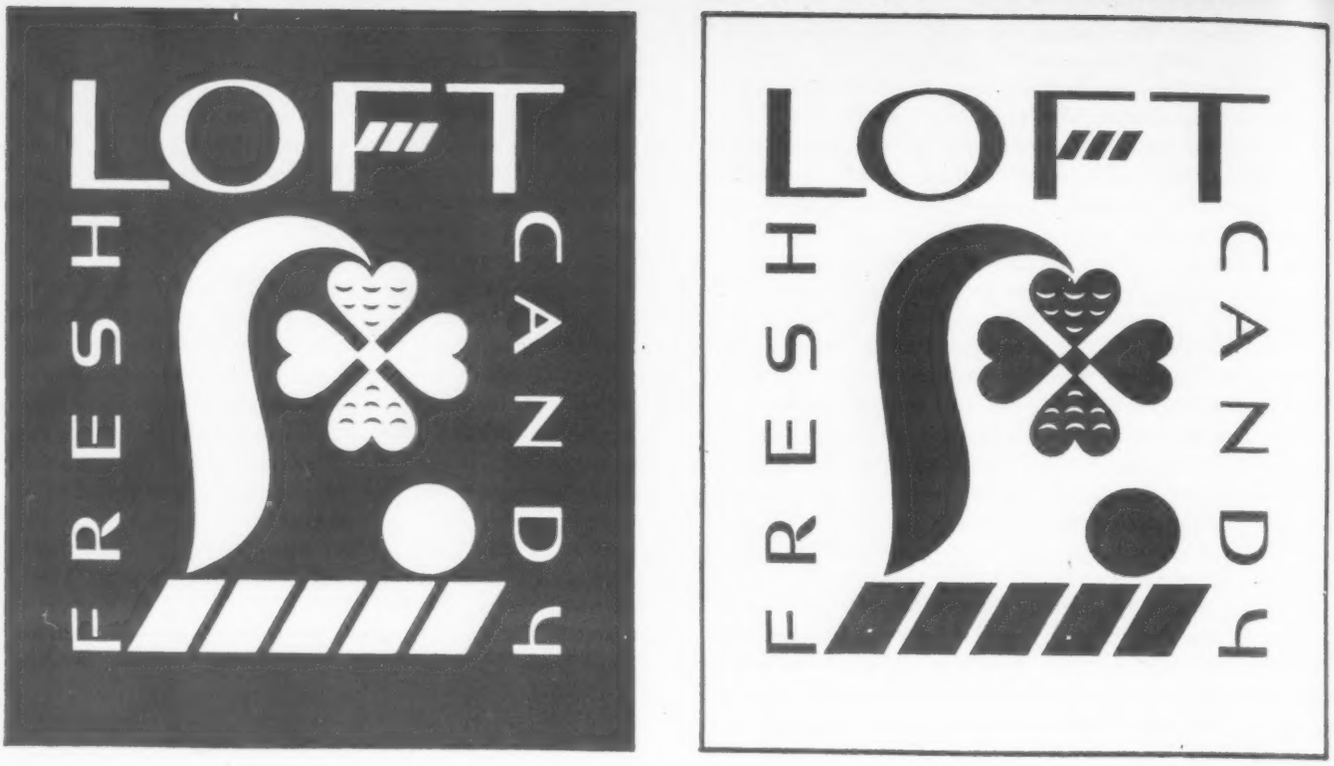
In no case, where there is a chance that an item might be sold as a gift, however, does our merchant believe that anything but a removable price ticket should be affixed. Standard items, such as tooth paste, cold creams, cleansing tissues and so forth, for which prices are standard, might have price designations printed on with other informative printing on the package. Mr. X limited his thesis entirely to the cosmetics and toiletries industry, but believes that the scope of price pre-ticketing would be a great service to manufacturers, the retailers and the public for all lines of goods in cases where prices are standard for nationally distributed products. There are many cases, however, where it would not be feasible—cigarettes, for example, where the tax variations throughout the states make it impossible to maintain one uniform price for all parts of the country.

There is also a basic economic angle to price-ticketing of packages by the manufacturer. The next few years will bring an era of highly competitive merchandising. Any practice that can cut down distribution costs between manufacturer and consumer should mean just that much more possibility of passing along those savings to the consumer through lower cost of operation. Elimination of the costly practice of price ticketing in retail stores should be reflected in decreased retail operating costs—a subject that is close to the heart of every store operator.

But far outweighing that, as far as toiletries are concerned, is the way the excellently packaged merchandise that leaves the factory reaches the consumer. Just ask any cosmetic manufacturer if he knows what percentage of his merchandise is returned after the holiday season—much of it because of package damages that would not have occurred if the cases had not had to be opened to be price-ticketed in September and October.



4—Standard items not usually bought as gifts can have price designations on labels. These Hudnut jars are a good example. For gift merchandise, nothing but removable price tickets should be used. Satisfactory, removable labels can easily be affixed by cosmetic manufacturers.



1—New Loft trademark appears frequently not only as theme for all package wraps, but also as dominant note in decorative schemes. Design lends itself to treatment in various ways. As the illustration shows, it is equally effective in color on white or in reverse; it also can be printed in multi-color or embossed.

"L" is for Loft . . . *it ties the package to the store*

In countries where the caste system prevails, it is difficult if not impossible to progress upward, though it is quite easy to lose caste. In American merchandising, it is similarly easy to lose caste, but happily it is not impossible to raise a given product to a higher stratification or quality bracket.

Loft candies have been making this upward progress and the principal means employed was their packaging program. The company was founded nearly three-quarters of a century ago and for many years enjoyed an enviable reputation for quality merchandise at moderate prices. Then something happened. Internal organizational changes took place and there was a very noticeable falling off in quality. Consequently the company and its products lost caste; the name Loft, in the words of one of the officers of the company, became synonymous with lower-priced candy and the company lost a great deal of the prestige it had built up.

Several years ago, like the prodigal son, they came to themselves and decided it was time for a change. Product quality was promptly graded up, a policy of progressive packaging was adopted, and a program of employee education was put into effect.[1] The results of these steps more than justified the changes. Sales increased, enthusiasm was generated among the employees and the public responded in a gratifying manner. The packages themselves, developed in Loft's own art department, marked a signal step forward. One of them was given an award in the Twelfth All-America Package Competition.

This earlier packaging program—which now turns out to have been an interim project—used as the color scheme for several of the items in the Loft line a coral candy stripe as a background with a medium blue for lettering and other decorative treatments. No attempt was made to unify the entire line with a pronounced "family" design or treatment; each package was an individual unit. But these two colors must have proved their sales effectiveness, for they were retained for the new program and to them were added gold and beige-gray.

Designer develops program

To develop this program, Loft turned to an independent designer of broad experience in the packaging field as well as in industrial design, store layout and merchandising. After devoting several months of study to the project, this designer submitted a plan based on a unified package treatment but capable in addition of application to general store decoration, stationery, menus and even for use on the Loft delivery trucks.

The heart of this plan was a new trademark, usable in color,

[1] The story was told in MODERN PACKAGING, August 1942, by George Frederick, Vice-President of Loft Candy Corp.

black and white, reverse printing or blind embossed. Dominant note is the modified Old English letter "L," flanked by the words "Fresh Candy" and surmounted with the name "LOFT." Featured with the letter "L" is a four-leafed clover of heart-shaped leaves.

There is no hard-and-fast rule for the color treatment of this trademark. Sometimes the "L" is in coral, sometimes in blue or gold. Sometimes the leaves of the clover are in one color; sometimes all four colors are used. But the complete mark appears in at least one place on every package and these packages in the course of a year, carry something like 14 million pounds of Loft candies, in two dozen or so different forms, to the consumers who have been flocking into the 175 Loft candy stores.

Studying these consumers was an important element in the designer's preparatory work. The designer found that they consisted largely of the middle class, with the normal American appreciation of sweets in attractive packages. His designs accordingly embody a treatment that is neither over their heads aesthetically, nor—on the other hand—of an overly ornate character that somehow associates itself with mediocre or poor quality.

White space tells "quality" story

Liberal use of white space sets off delicate color and design to create an impression of freshness, daintiness and superior quality. There is a wide variety of design treatment shown on the various box wraps, so that each item in the line has a package with individuality; but there is also a harmonious treatment in the use of the basic trademark and the standardized colors that definitely identifies them as products of one manufacturer.

Under the new plan as developed by their design consultant, the Loft people intend that each store shall become a large-scale package display, the decorative treatment of which harmonizes fully in color and design with the basic trademark and the packages. One store, at 11 E. 42nd St., New York,

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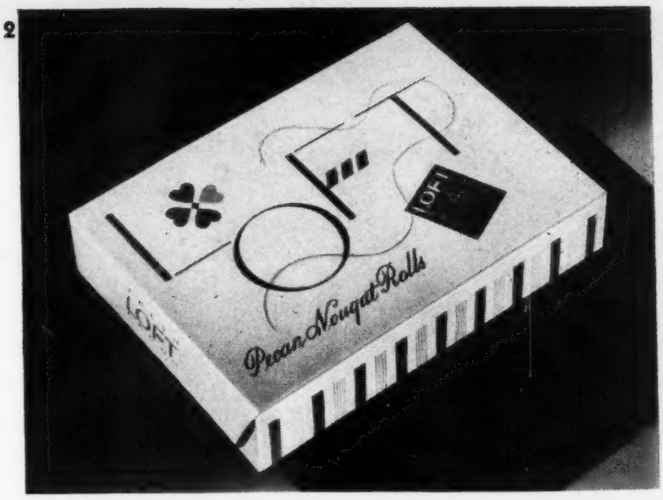

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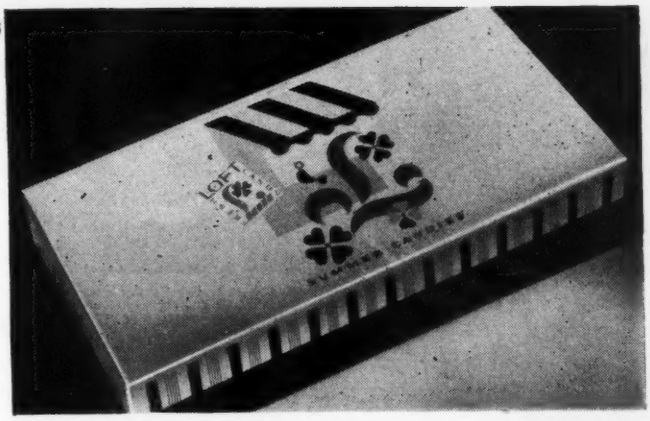

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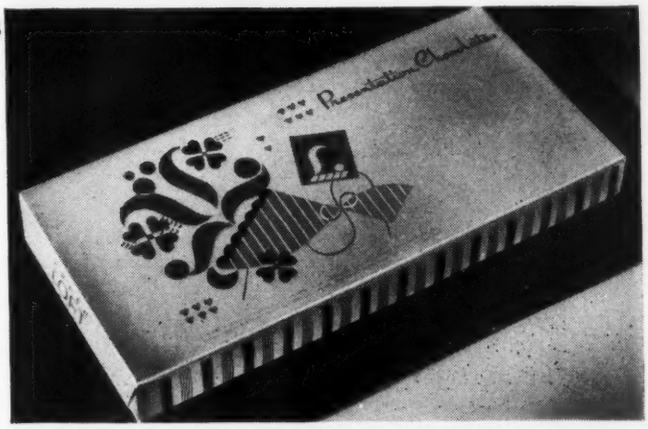

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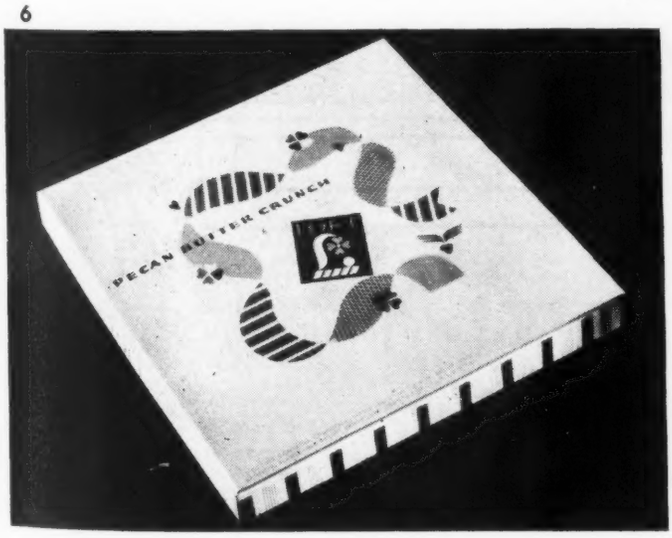

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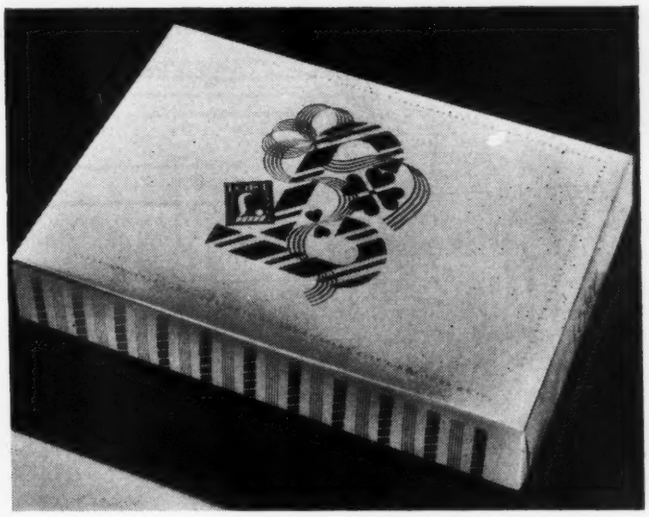


2, 3, 4, 5 and 6—No attempt is made to standardize packages along conventional "family" lines—rather each package is treated as an individual unit. Whatever the size, shape or contents, however, the packages are now unmistakably labeled "Loft." The use of the trademark somewhere on the package unifies the line and the flexible color scheme breathes daintiness and quality.

7

8

has recently been opened to the public formally. This is to be the pattern for remodeling the entire chain, modified of course in adaptation to the size and shape of each particular location.

Store front highlights packages

The store front leaves nothing to the imagination—it says unmistakably and invitingly, "This is a Loft Candy Store!" The window, even when filled with packaged candy, permits full view of the interior. Inside, the layout gives evidence of an understanding of the movement of store traffic. Because these stores are usually limited in floor space, island displays and floor stands have been eliminated to permit free circulation.

On the left is the "candy gallery"—a series of glassed-in cabinets which exhibits the many and varied items in the Loft line, enabling the customer to make his own selection on the basis of variety, size and price before he approaches the other side of the store where efficient sales clerks man the selling counters.

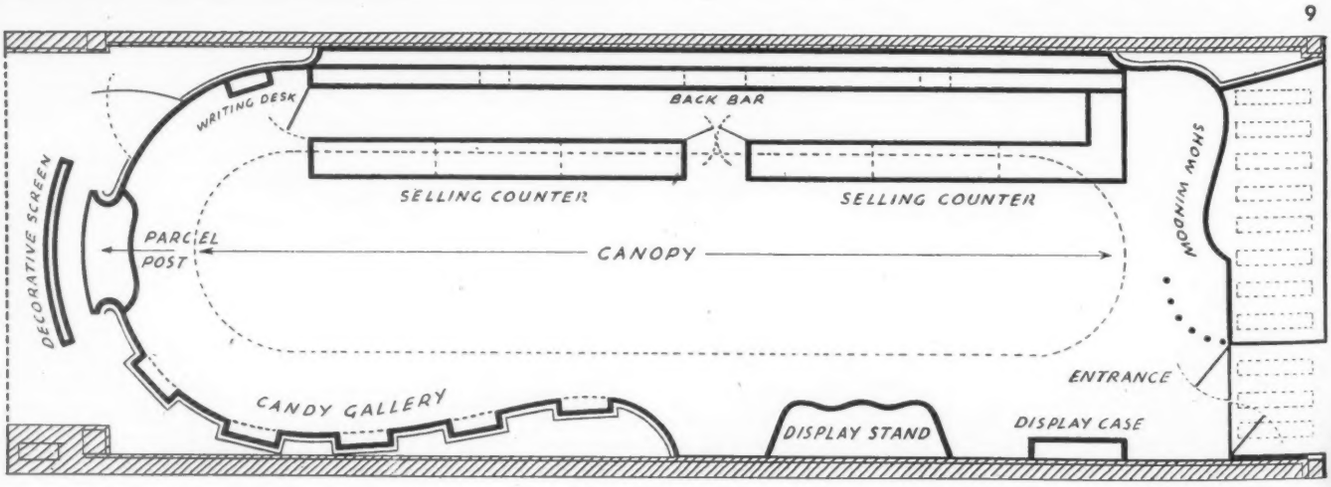
The trademark device, throughout the store, is used in a manner reminiscent of medieval heraldry. The decorative initial "L" appears stenciled on the side walls toward the front of the store; the entire trademark, illuminated and of large size, appears in a recessed frame back of the little gate which leads to the selling counters; and even there, mirrors pick up and reflect the letter "L" used to decorate the walls on the opposite side of the store.

Other notes from the package, too, are picked up in the decorative scheme. The recessed wall cases for displaying the packaged candies repeat the heart-shaped clover leaves of the trademark; the edge of the overhead canopy picks up the coral-rose candy stripe, seen against the sky-blue of the ceiling. The warm beige-gray, used freely for background ef-

Insert, right—This sample wrap shows the color scheme—coral pink, medium blue, beige gray and gold—used on twenty or more packaged items in Loft line; same colors are used in the decorative scheme for the new Loft stores.

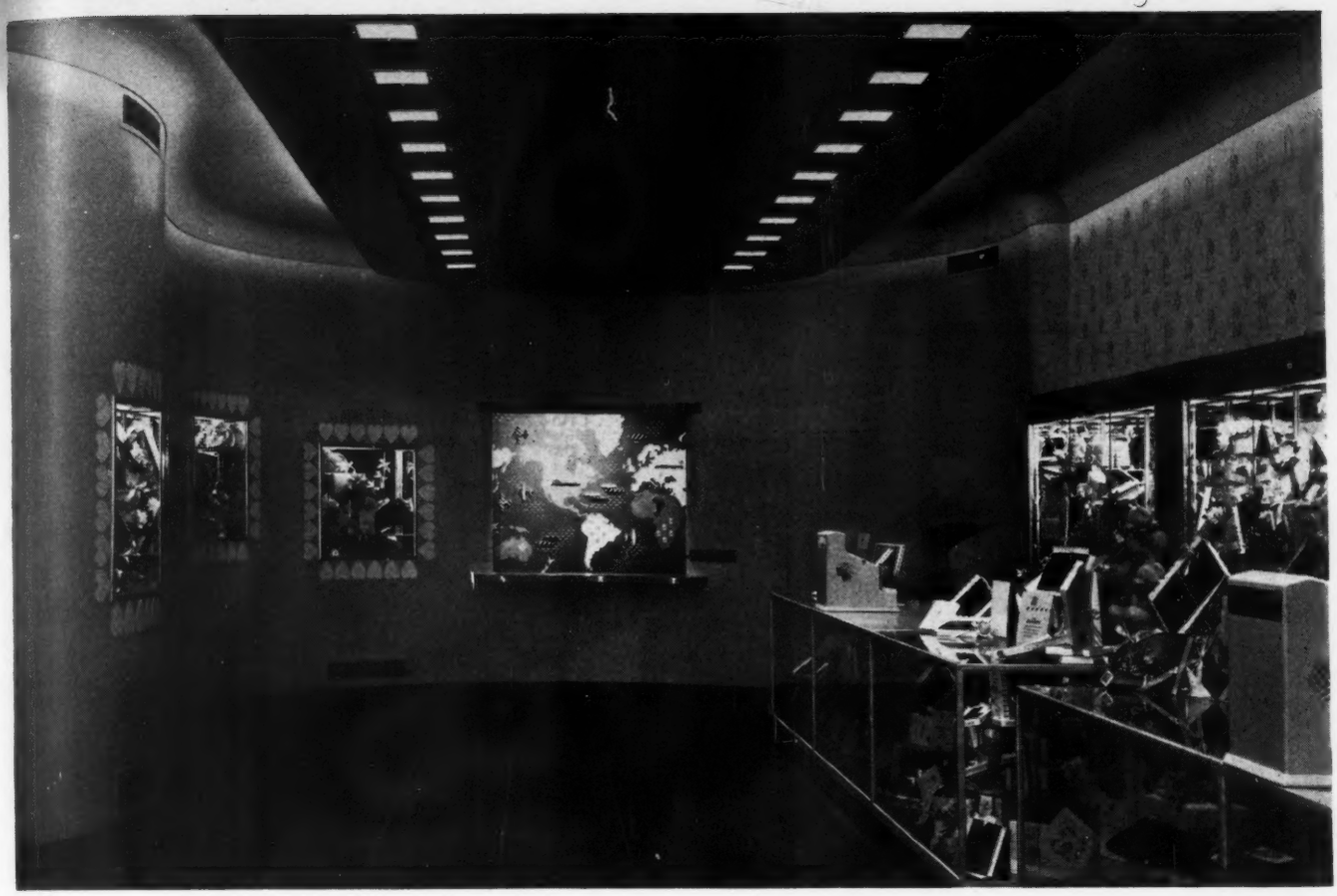
7 *and* **8**—*Trademark which appears at least once on each package also appears on company's stationary, menus and even on delivery trucks.* **9**—*Loft store layout is designed to exhibit packaged goodies to best advantage. It capitalizes on the eye-appeal of the packages, which may be inspected at eye level in special cases at left. Colors and trade mark "L" of package are repeated in store decoration.*

9



PAYDAY
Milk Chocolate
FRESH
LOFT
CANDY
10 OZ. NET. CONTAINS: CHOCOLATE · NUTS · HONEY · SUGAR · COND. MILK · CREAM · CORN SYRUP · FROZEN EGG WHITES · ART'F'L FLAVOR · MFG. BY LOFT CANDY CORP., L. I. C. I., N. Y. ©1945

BOX WRAP PRODUCED BY REYNOLDS PRINTING CO., NEW YORK, N. Y.



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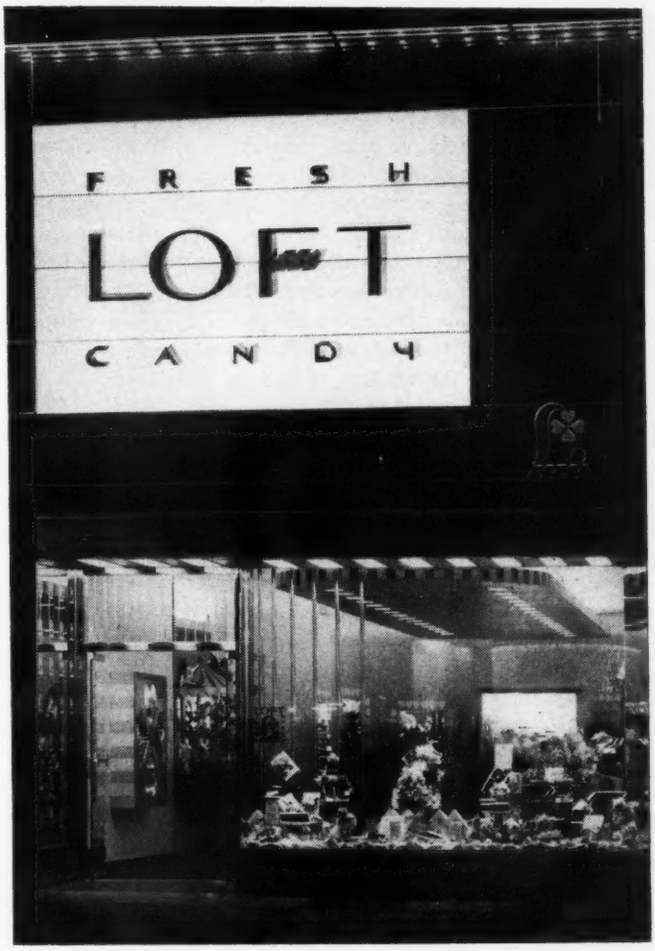

10—*Using a decorative scheme in which the Loft trademark and special colors dominate, the store arrangement creates an impression of spaciousness in a small area. The full color map at the rear carries a powerful selling message.* **11**—*Store front leaves nothing to the imagination—it says "Loft." The window, even when it is filled with packaged candy, permits full view of the interior.*

fect, makes an excellent foil for the daintily colored confectionery packages.

The selling counters, too, and cabinets back of them, contain further displays of packaged merchandise, while at the rear of the store is the parcel post counter. Here is an illuminated map of the world in full color, atop of which is the selling suggestion "Send Loft Candy Anywhere." Overhead the canopy with its indirect lighting sheds a luminous glow in a manner well calculated to enhance the appeal of the wide variety of packaged sweets set in their luxurious-looking background.

Unusual success has greated this new venture. This first store, located near America's metropolitan crossroads, has always enjoyed excellent patronage. Flanked by competing shops, the new store proved to be a lodestone for the public—crowds flocked in from the day of the opening. The experience of the Loft organization in this instance seems to demonstrate that the public has an innate sense of good taste which responds to the invitation of good packaging, particularly in a case like this, where the package sets the theme for a complete merchandising program.

CREDITS: *All designs by Charles C. S. Dean, New York. Box wraps by Reynolds Printing Co., New York.*

Produce by air

...pre-packaged and pre-cooled

1—Pre-packaged and pre-cooled, California produce is brought from refrigerating plant by truck and loaded on special cargo plane in cool evening hours. Only 24 hours later it will be served at New York dinner tables.

Most authorities agree that the ultimate development of pre-packing of fresh produce will take the packaging operation right to the grower's shed. Particularly is this desirable in the case of air-borne produce, which, to command the necessary premium price, must move with the maximum of speed and the minimum of handling once it is on its way.

A pioneering air cargo operation now under way in California is as important to this phase as is the Columbus A & P experiment* to the retail handling of pre-packaged produce. Together, the two operations form a laboratory for invaluable study of the whole question of pre-packaging, from grower to transporter to wholesaler to retailer to consumer.

The Ralph E. Myers Co., of Salinas, Calif., has just completed the first experimental three-month program during which 36,000 lbs. of fruits and produce—pre-packaged in consumer-size units—have been flown each week to Eastern markets, arriving ready for sale about 24 hours after picking. During this period the facilities of chartered United Air Lines planes were used, as well as a four-engined M-39 transport built experimentally by Consolidated Vultee and operated by American Airlines. These planes have now been replaced by a fleet of seven Conestogas, operated by the former Flying Tiger pilots who have organized as National Skyways, Inc.

The Conestogas are the famous "flying box cars," with short, squat, squared fuselages especially designed to carry the most effective payload of freight only. With an 8,000-lb. payload, the Conestogas will cut air shipment costs considerably and lift the tonnage flown by Myers to around 60,000 lbs. a week. Airports at Lodi, Salinas, Fresno and San Francisco will be used for loading, depending upon the seasonal shifting of crops, and the principal Eastern destinations will be Cleveland, Chicago, Detroit, New York, Boston and Philadelphia.

Ralph Myers, who earned his title of "Lettuce King" by becoming the nation's biggest producer of that commodity, has expanded his packing and shipping business to include many varieties of fruits and vegetables. Young, aggressive and a veteran pilot himself, he is firmly convinced of the future of air cargo in his business. He ships 7,000 carloads yearly, and is prepared to place his entire business in the air if ton-mile rates can be hammered down to a practical level.

Nevertheless, Mr. Myers is by no means overlooking the many problems, in addition to high cargo rates, which must be overcome. There are problems of packaging, of pre-cooling, of ground transport, of growing methods and of getting direct-to-consumer distribution. He is attacking all these problems in something of a one-man crusade which, under existing OPA price ceilings, is costing him money. When OPA ceilings are relaxed, to permit air-borne produce to sell to Eastern housewives at the premium price its quality justifies, it should be possible, Mr. Myers thinks, to ship all produce by air profitably; meanwhile, he is flying only a comparatively few specialty crops and taking a loss on them.

Right now pre-packaged air-borne produce is selling to Eastern consumers at prices only one-quarter to one-third higher than those charged for rail-borne items, which require 15 days in transit.

Packaging principles

Present packaging practices have evolved from cut-and-try experimentation over the last year and, while ideal materials are still not always available, Mr. Myers feels that he has arrived at some sound principles. He stresses these points:

* See "Packaged Produce," MODERN PACKAGING, July 1945, pp. 89–95.

1. Pre-cool the produce and load, and transport it during the night hours.
2. Provide ventilation of the unit package to avoid condensation of moisture, which will fog transparent wraps.
3. Keep packages small enough for single use by the average small household.
4. Capitalize on the drama of air transport and on *freshness* —through labels, displays and promotion.
5. Mechanize the packaging operation wherever possible.
6. Have packaging done in the shed of the individual grower rather than at the shipping point, as far as possible.

Mr. Myers recognized from the start that visibility was essential to the acceptance of premium produce. Getting visibility in an individual package that would be light, economical, attractive and that would handle well in air transport and frequent temperature changes was a problem. He has tried and discarded dozens of packages and materials, including various types of transparent films, fibre boxes, waxed-paper cartons and veneer boxes.

The cellophane first used appeared to invite condensation on the inside and thus detract substantially from the appearance of produce exposed to sharp temperature changes in transit. Fibre boxes first tried were prone to absorb moisture, both from contents and from the outside, and had to be stapled shut, which was unsatisfactory. Produce shipped loose in large cartons was likely to spoil and lose at least 50% of its appearance value.

Unit packages

For his present volume operation Mr. Myers has more or less standardized on three types of unit packages.

Handling the bulk of both fruit and vegetable items is a 1-lb.-net carton, in either square or oblong shape, with a window of cellophane, acetate, glassine or other transparent material. The lightweight board used in this carton is a laminated sheet consisting of exterior of bond with two layers of sulphite and with a parchment inner liner. The board is printed on the outside with a moisture-resistant ink. The patented carton comes flat and may be quickly folded together, filled and locked shut by means of locking tabs. One of the top edges is perforated over most of its length to permit easy opening. The transparent window extends halfway down the front and halfway back over the top, to permit easy visibility of the contents. Ventilation holes are punched in the box to facilitate pre-cooling and also to minimize condensation during shipment.

This package, for its strong construction, good appearance

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2—A variety of produce ready to load. Each item is packaged in consumer size and bears the "Magic Carpet" label originated by Ralph E. Myers (right), pioneer air shipper, to stress freshness and superior quality of air-borne produce. **3**—*Conestoga plane, with squared fuselage specially built for cargo, and rear-loading door. Seven of these planes are now flying 60,000 lbs. of packaged produce weekly from Salinas, with important savings in cost.*

and ease of handling, has proved ideal for the Myers company and will be permanent. The all-over color of the cartons is a light green, with label information printed in a dark blue —the light green being considered to show off the natural color of most fruit and vegetable items to best advantage. Imprinting includes the standard Myers trade mark, a winged insignia bearing the brand name, "Magic Carpet," and stressing the fact that these are air-borne foods, flown by the Ralph E. Myers Co. The trade mark appears prominently on the top panel and in smaller size on each of the two end panels. Other copy stresses the "Fresh as Fresh Air" slogan and the fact that fruits are "tree-ripened."

The window carton is used in oblong form for tomatoes, pears, peaches and other round fruit. The square type is used for strawberries, blueberries, brocolli, asparagus, figs and other such small-size produce. A typical package is the peach package, imprinted with the label "Two Tree-Ripened Peaches" and containing two premium peaches hand-selected for air shipment.

A second type of package is a transparent bag—either cellulose acetate or cellophane—in which such items as peas, carrots, cauliflower, lima beans, string beans, spinach and some types of broccoli are packed. These are 8- to 12-oz. gusset bags with the "Magic Carpet" label printed front and rear; they are closed with a cardboard header prominently displaying the air-borne trade mark, and are stapled shut.

It should be noted that in the case of this pre-cooled, rapid-transit produce, designed for quick sale, heat-sealing is felt to be neither necessary nor desirable. The problem is to prevent condensation after cooling. Heat-sealing was tested in several ways, including enclosing an ordinary veneer wood strawberry box in transparent film and sealing it airtight, but it proved to be of no benefit and the resultant condensation was a drawback. Actually, with the rapid movement and turnover that this produce has, there is little opportunity for spoilage; the important factors in all packages are appearance and ease of handling. Thus the problem is quite different from that tackled in the A & P Columbus program, where the aim is a tightly sealed package to prolong shelf-life and prevent spoilage.

The third type of package is the individual wrapping of lettuce heads in a transparent film, with the "Magic Carpet" label showing through from the outside. This is a very large operation, since lettuce is still the backbone of the Myers business, and an ingenious machine—which will be described later in this article—has been developed to handle it. Due to OPA price restrictions it was necessary to package each head individually so that a premium price could be charged. Individual bags of acetate were first used, but the operation proved too slow.

For his transparent material in all types of packages, Mr. Myers strongly favors cellulose acetate. Although it is water-

PHOTO COURTESY FOOD FIELD REPORTER

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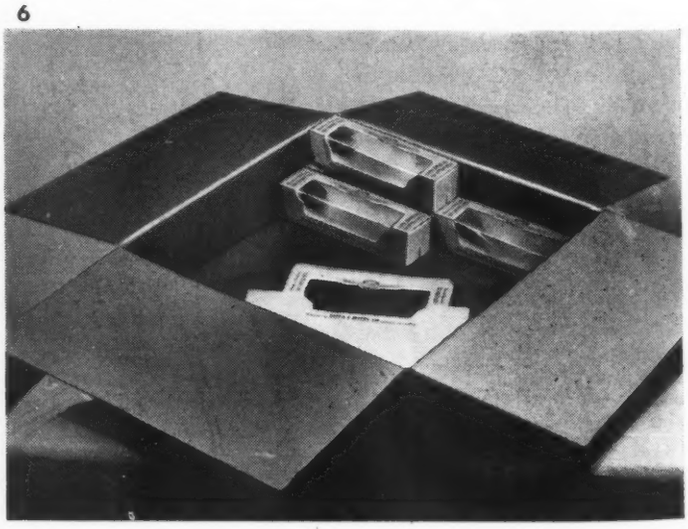

4—Air-borne produce on sale in Grosse Pointe, Mich., market. Lettuce, wrapped in acetate, costs 29 cents per lb. Usually such displays have pennants and streamers stressing air-freshness of California produce. 5—Window cartons like this have become standard for most Myers items. Special board resists absorption of moisture; vent holes minimize condensation on window. Note "Magic Carpet" trademark, "fresh, tree-ripened" theme. 6—Showing how 28 packages fit in special corrugated shipping container.

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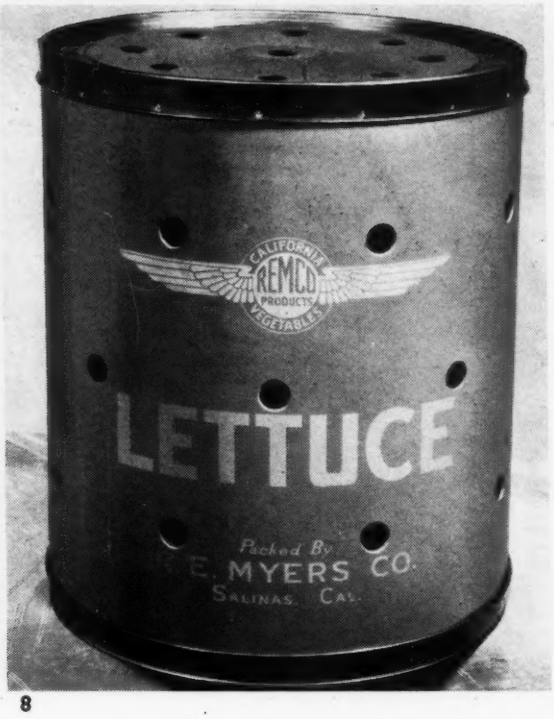

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7—Lettuce, wrapped on automatic machine 60 per minute, is shipped in a special wirebound veneer crate, with lining of waterproof paper. Corrugated containers also are used. 8—This drum-type shipping container for lettuce, illustrating ventilation principle, was discarded because it was wasteful of cargo space.

proof and greaseproof, the acetate film is not so resistant to the transfer of water-vapor as cellophane, and in this case—where the formation of condensation of moisture, fogging visibility, is a major concern—this appears to be an advantage.

"After many experimental tests and actual shipments of lettuce wrapped in transparent materials," says Mr. Myers, "the acetate-wrapped lettuce appeared the best. We found the acetate wrappings to hold less condensation than other types of transparent sheets, thus allowing the product to be more visible.

"It seems that the coatings on cellophane cause the condensation to form in small beads and stay where formed, whereas the condensation forming on the acetate will roll from one head to another, helping to clear the moisture from the sheet. Another advantage is that acetate stays crinkly and crisp under moist conditions, thereby giving the customer a feeling that the product is fresh."

Shipping containers

At the start of these experiments a major problem was that of providing ample payloads in square containers carried in rounded airplane fuselages. Mr. Myers tried cylindrical containers, including fibre and light metal, but concluded that these were too expensive. The solution has now presented itself with the development of such special freight airplanes as the Conestoga, which have squared fuselages for maximum stowage of rectangular containers. The Conestoga permits much more effective payloads with such light items as lettuce, broccoli and spinach; the earlier flights proved uneconomical for these items.

The window cartons are packed for shipment in a special corrugated container which holds 28 of the average-sized cartons. The shipping container, 28 by 26 by 7 in., is of heavy board, and is divided into two layers by a separator. The lid is the standard full-flap type and is secured with gummed tape *after* the pre-cooling of the produce. Mr. Myers states that this container has proved very satisfactory for his purposes; it is sufficiently rugged to be returned and re-used if desired.

The bag packages are packed in a wirebound crate—made of sliced veneer rather than sawn lumber—which was specially developed for this job. These crates will accommodate from 36 to 48 bags of produce. They are 50% lighter than the sawn lumber type and they are said to provide greater strength, necessary for rough handling at high speed in air and truck shipment.

For the wrapped lettuce heads, both the veneer crate and the corrugated container have been used, with equally satisfactory results. Crates and cartons are lined with waterproof paper. Mr. Myers is not yet ready to say whether he will ultimately standardize on one or the other. However, he is experimenting with both a large fibreboard container and a crate having slotted false bottoms on which dry ice can be placed to refrigerate the lettuce in shipment. Present thinking is that this method will be adapted to rail shipment, since refrigeration does not appear to be necessary for air shipment of produce when it is pre-cooled.

Mechanized wrapping

The lettuce-head wrapping machine is most ingenious in its conception and operation. The machine consists of a T-shaped metal frame from which two conveyors branch, both leading into a scaffold where the wrapping mechanism is centered. Two girls operate the machine, which is set up alongside the main conveyor belt in the Myers lettuce shed.

Premium lettuce heads, as they move along the main conveyor, are picked out and placed on a rotating metal conveyor made up of individual square frames 8 by 8 in. and containing four spring-loaded "fingers" which suspend the head inside the frame. Moving swiftly toward the center of the machine, these fingers bring the lettuce head over a sheet of film fed from a roller under the scaffold. At the exact center of the

9—Huge California strawberries in header-type ventilated fibreboard boxes overwrapped with transparent film.

machine, a wooden plunger—hollowed out at the bottom and lined with sponge rubber—comes down, forces the head of lettuce out of the fingers and onto the wrapping film, which is at the same time being cut by automatic knives into the proper size and shape. Both lettuce and wrapper are forced down into a cavity below the belt, leaving the film edges projecting above. A system of loops and snips seizes the neck of the film and wraps a wire tightly around it, snipping it off neatly, to secure the wrapping.

The wrapped head then falls through to another conveyor which carries it off to the packer, who loads from 48 to 60 heads, depending on size, in the crate or fibreboard shipping container.

This machine, powered by a half-horse motor, has solved completely the problem of high-speed wrapping of lettuce; it produces a tightly drawn, glistening wrapper which enhances the appearance of the lettuce, and it produces one wrapped head per second, or enough to fill a crate every minute.

Hand packaging

Except for the lettuce machine (and development work is under way for carrot and pea packaging machines), Myers' entire packaging job is carried out by hand on three large tables set up in the lettuce shed.

Fruit and produce of premium quality are brought in from the grower in lugs or picking boxes. At the first table it is washed, separated and all culls removed for sale to local West Coast markets. In flat wooden boxes, the items move to the second table. This table is built in horseshoe shape and a girl crew of six works inside. The window cartons, bags and shipping containers are all assembled here and each package is filled and closed by hand. Scoops are used to load peas and beans in packages. Each girl has a hand stapler on a cord around her neck for closing the bags. Work is carried out in "runs"—tomatoes at one time, peas at another, etc.—and the six-girl crew, chosen for deftness, handles the entire operation of cleaning, separating and sorting, as well as the filling of the unit packages, the loading of the shipping containers and the stacking of containers on flats on which they are trucked to the ice plant for the requisite pre-cooling.

Among the important results of Myers' year of experimental air shipment has been disproof of the idea that the lower temperatures prevalent at flying altitudes would be sufficient in themselves to protect and preserve fresh produce. The best solution, he has found, is to pre-cool every shipment for at least six to eight hours, leaving shipping containers unsealed during cooling and leaving unit packages open to circulation of cold air through ventilating holes or porous closures.

Originally Mr. Myers asked his cargo pilots to find an altitude at which the temperature might be held between 35 and 45 deg. F., with a thermometer on the interior of the fuselage ruling on the matter. This proved impractical, however, since it was found that average summer temperatures at 10,000 feet in fact average close to 65 to 70 deg. It isn't practical to fly much higher on this long haul in view of the much greater fuel consumption and resultant additional expense.

The present method works very well and Mr. Myers feels that it is the best that can be devised. The crops are picked in the early morning, prepared and packaged by noon, trucked immediately to the local ice plant and allowed to cool there for the rest of the day. Condensation on removal from the refrigerating plant is minimized because removal takes place after dark, when temperatures become quite low in this part of California. Loading and flying both take place during the night hours, when temperature is most favorable. Generally, the thoroughly chilled produce does not heat up appreciably during transit.

Instead of handling all air-borne produce directly from his own plant, Myers has recently set up contracts with growers themselves to bring their produce ready-packaged, pre-cooled and ready for the plane. Each of the growers picks his crop at a time prearranged in consideration of the time that the "Magic Carpet" plane will land at Salinas. Each grower follows Myers' specified method of packaging and pre-cools his shipment in his own local ice house. Mr. Myers believes this to be the ideal arrangement and he thinks the future will find all growers in the Salinas district doing their own packaging of their premium crops for air shipment from a central point. This will help lower costs.

Merchandising and promotion

Mr. Myers' interest doesn't cease when the plane takes off. For his present volume operation, he has retailers lined up in points of destination who will meet the plane and rush the shipments direct to counters, arranging for alternates in case of bad weather. These retailers are, of course, pre-contacted by Myers' agents, and furnished with huge red-and-white streamers blazoning the words "Air-borne" and the "Magic Carpet" label and trade mark. Many co-operating retailers inaugurating the air-borne service have staged "Hollywood openings," complete with decorated store fronts, floodlights, music and similar props.

Mr. Myers believes this type of all-out promotion is necessary as long as air-borne produce must sell at a high price. He realizes, however, that lowering the price is his most important objective and he works away at this steadily.

Every possible economy in (*Continued on page 162*)

Family design... *for an ethical line*

1—New penicillin package adopted by Bristol. Bottle is packaged in folding carton. Five cartons make up unit in background. Gray green and buff at top of photo are identical colors used in newly designed package family.

Ethical drug packages essentially aim to appear dignified, giving an assurance of the quality of their contents. Usually they lack eye-appeal and attention value, characteristics of many proprietary products on drug store shelves. This difference is understandable, for ethical drugs are sold only on prescription or advice of physicians. Ethical drug labels likewise are difficult to streamline since their copy must conform to strict Government requirements.

Bristol Laboratories, Inc., however, surprised the ethical drug trade this month by introducing a complete newly designed package family whose beauty only enhances its increased utility value.

Color combinations—green, subdued with gray, together with light brown buff—along with simple basic designs and distinctive type harmonize with added utility values, such as: tamperproof seals, and squat bottles and vials, less liable to tip over than their taller predecessors, from which doctors found it difficult to extract contents with a hypodermic needle.

Early this year the company faced two main problems: revision of labels, cartons, containers and inside literature of its 250 catalog items to meet amendments to the Food and Drug Act; and improvement of its packages.

The packaging development division decided that the company's two main problems could not be solved by one man or one department; consequently a Packaging Committee was formed, with a personnel of ten members, representative of every department.

Life or death! That's what adequate and distinctive labeling means to users of drugs and therefore to the manufacturers of drugs. Packaging, including labeling, is a prime requisite to the successful functioning of an ethical drug manufacturer. Therefore, the firm believed packaging was the concern of every department. It realized that packaging always is the product of analysis and compromise and reasoned that correct solutions to its dual packaging problems could be obtained only through company teamwork and constant close cooperation with all parties concerned—printers, carton-container manufacturers, labeling machine makers, multigraphers and the industrial designer.

Bristol Laboratories is the first ethical drug manufacturer to redesign completely its entire line since the Food and Drug Act revisions became effective October 10, 1945.

The new packages contrast sharply with most competitive products, though these Bristol items appear at a period when for the first time in the history of the American drug industry labeling changes had to be instant and simultaneous, rather than gradual as heretofore.

How the company and its outside assistants created a new packaging family, despite such simultaneous problems as increasing wartime production in the face of shortages and scarcities and expanding civilian demand, is a story of cooperation, which can be detailed only after a brief explanation of, and reasons for, revisions of the Food and Drug Act.

Revisions of the Food, Drug and Cosmetic Act of 1938, promulgated October 10, 1944, and effective a year later, seek to systematize drug labels and thereby make the use of all drugs safe.

Under the new regulations, Sec. 502 (f) 1 of the act, drugs were divided into two broad classifications:

1. Drugs for prescription use only; and
2. Drugs which can be used safely in self-medication.

Most drugs under the first classification contained too many directions on how to use. Their labels, accordingly, had to be changed to *prevent* self-medication. Many directions had to be eliminated. Caution notices had to be added, such as "Caution: Not to be used except on the prescription of a (physician, dentist or veterinarian)." These caution notices also had to add the drug's disadvantages; such as, for

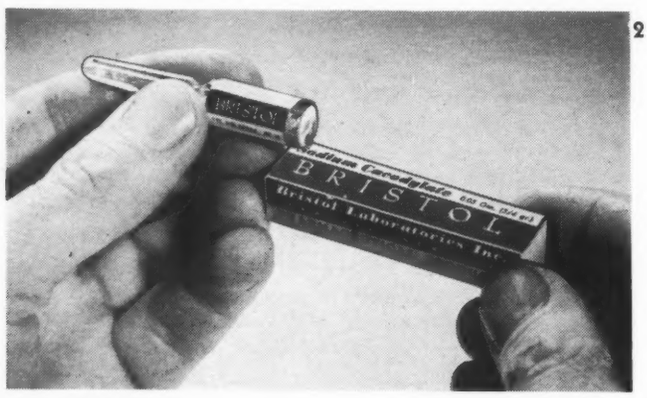
example, in certain products, the possible effect where allergic conditions exist.

Under the second classification, which concerned proprietary drugs, most items carried directions for uses known to the average individual. New labels, however, were required on many of these common household products, as a safeguard against misuse.

Bristol Laboratories—successor to Cheplin Laboratories, Inc., founded in 1923 in Syracuse, N. Y., and acquired by Bristol-Myers Co. in 1943—came under the first drug classification. Bristol produces chemical pharmaceuticals for direct use by doctors. It specializes in parenteral drugs—those products which are directly injected into the human blood stream and therefore require absolute cleanliness and sterility.

The company, aiming to meet the deadline of the Food and Drug Act revisions despite wartime conditions, had to make more than 1,000 changes in its packaging materials, because every change in each of its more than 250 products also involved at least three other changes—in labels, cartons and containers.

Bristol's repackaging program started last February with the formation of the Packaging Committee, which was to serve two purposes: (1) to plan and carry out the packaging revision, and (2) to be an instrument in the maintenance of correct packaging procedure.



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Personnel of the Committee included: the medical director, control laboratory manager, new products manager, production manager, coordinator of packaging development, purchasing agent, representative of the legal department, sales manager and advertising manager.

A basic policy had to be established by the Committee. Many of the company's 250 catalog items, whose labels, cartons and containers had to be changed by law, were used in relatively small quantities. Economical printing runs of such individual items were not practical. Yet control numbers had to be incorporated on all labels, cartons and containers. Costs had to be considered even in making these legally required changes.

Should the company therefore merely modify existing packaging design?

Or should the company completely break away from its present line of packages, which had undergone only minor modification in the firm's 22-year history?

The Packaging Committee sought the advice of each of its members.

Latest research developments and medical thinking on ethical drug packaging and labeling from such points of view as rapid reading, general visibility and ease of handling were reported on by the medical director. Characteristics of the products under control tests, protective qualities needed by packages for safe storage and similar facts were contributed by the control laboratory manager. Advice about materials, machines and methods—some of them developed during the war—that would contribute to efficient and economical production came from the production manager. The availability of suggested and required materials and machines, despite the war's restrictions and regulations, was indicated by the purchasing agent.

***2**—On newly designed label, copy runs parallel with height of ampoule to facilitate reading.* ***3**—Bristol family group shows how design principles were carried out on all containers in spite of varying size or shape.*

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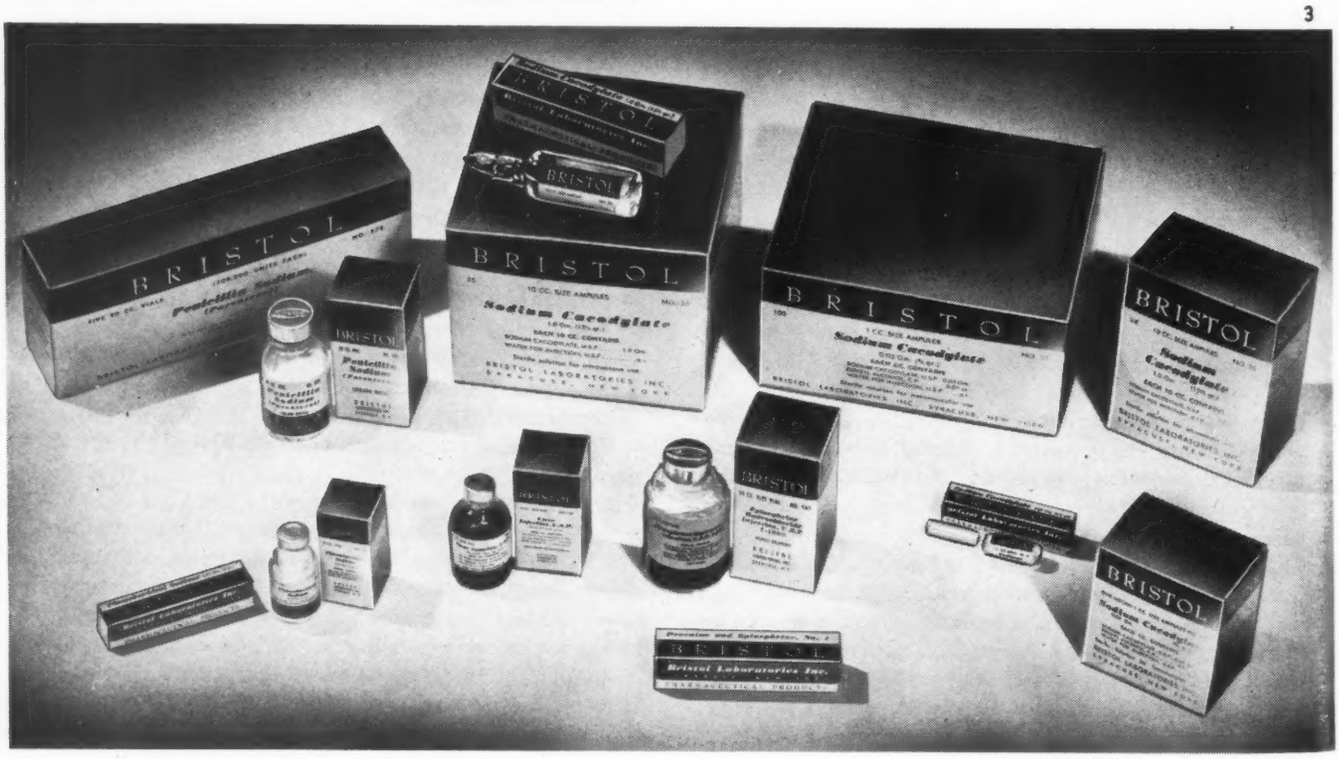

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4—In controlled, sterile atmosphere beyond the glass walls, girls package and cap penicillin. Conveyor carries filled, capped bottles through opening in the foreground. Packaging can then be completed without any further sterile precautions.

Packaging developments and trends in drugs and other fields were reported on by the coordinator of packaging, whose detailed knowledge often was utilized to fuse suggestions of the scientific and business members of the committee. Developments in the world of new products were recounted by the manager of that department. Legal counsel advised on copy required on labels, cartons, containers and inside literature. The sales and advertising managers observed that doctors often told the nurses the kind of drugs needed, but the nurses selected from the hospital shelves attractive and clean packages of the prescribed drugs. Furthermore, the sales and advertising managers reported on size, copy content, colors, consumer acceptance and side-by-side tests when products were arranged on hospital shelves alongside competitive items.

Out of such wide experience and observation the Committee surveyed the company's products, compared them with competitors, and concluded that the then Cheplin (now Bristol) products had several variations in basic design, had no color standardization and that the oval Cheplin trade mark was similar to those of several competitive ethical products.

Then the Committee reached two decisions:

1. Its members would try to modify the company's diverse packaging design; and

2. It would assign the task of redesigning a package to an expert industrial designer outside the company.

The designer was requested, through the carton supplier, to create a new package, while Bristol's packaging committee tackled the job of modifying present designs and standardizing the varied shapes and sizes of ampoules, bottles and vials.

The Committee did not try to influence or restrict the thinking of the designer, but told him that there were certain criteria by which it would measure end results.

"Visualize, please," the Committee in effect said to him, "a long-established company recently re-invigorated by the addition of young, progressive personnel characterized by vigorous thinking but who, because of their connection with the medical profession, are inclined towards conservatism. In addition, the company recently started the production of penicillin in one of the most modern installations and is well on its way to becoming one of the largest producers of that drug. The redesigned package should translate these factors into a visual presentation that will impress the medical profession."

Professional traditions, legal requirements and manufacturing demands posed certain design problems. The color scheme had to be dignified. High vibration colors, such as yellow and orange, would offend physicians and therefore had to be avoided. Colors of low intensity such as green, gray and buff had to be chosen. Likewise the designer had to avoid colors already being used by competitors. The FDA requirements called for a certain amount of copy, all of which had to be in type easily readable, even on the smallest ampule, the label of which was only $^5/_8$ of an inch high and one inch long. The various sizes and shapes of ampules, bottles and vials called for a simple type of design.

Meanwhile, Bristol's packaging committee debated, discussed and gave much thought to its two-fold aims—complying with FDA revisions and modifying designs—as a reading of minutes of the meetings will attest. Eight decisions were reached:

1. Tall bottles and vials were replaced with squat ones, because the former tended to tip (*Continued on page 164*)

Metal Lithography

...the case for decorated containers

*by W. P. Murray**

1—*Reproduction of the Stuart portrait of Washington on this cookie box is a duplicate of a museum piece of lithography, done years ago on stone with 13 colors. With the modern photographic method only seven colors are used and the work is inexpensive enough to make a commercial package—yet experts say modern job is better.*

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2—*Two examples of the use of multi-color lithography which adds to the sales appeal of crayons by suggesting the brilliant colors they produce. Hinged covers add considerably to the lifespan of these sturdily made metal boxes.*

The Smithsonian Institution in Washington, D. C., is in possession of a metal cookie box, the cover of which is considered one of the finest specimens of metal lithography in existence. The subject of the reproduction is Gilbert Stuart's famous portrait of George Washington. Thirteen colors were used to bring out all the subleties of tone and hue found in the original. Yet, in our display room in New York City, we have a duplicate of this museum piece done in only seven colors. Placed side by side, no one would hesitate to name the second the better. The difference is not one of craftsmanship, but of technique. The first one was done by the old method of stone reproduction; the second, by the modern photographic process.

As in many other industrial arts, metal lithography has developed and improved through this constant interplay of two factors—one is skill in craftsmanship, human "know-how" that is acquired over the course of years; the other is advancement in technology, representing mechanical, chemical and other developments that slowly improve and often revolutionize the basic tools of the trade. A third factor—not seemingly a part of this thought and yet fundamental to it in a business sense—is merchandising effort. By creating an ever-growing market for decorated metal packages, a tremendous outlet for these products is assured, which, in turn, makes relatively large-scale manufacture and low-production costs possible.

During the war, the manufacture of decorated metal containers for specialty consumer products was stopped by Government limitation orders. But instead of resulting in an era of technological dormancy, this period actually stimulated improvement all down the line.

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* General Manager, General Line Sales, Continental Can Co., N.Y.

It must not be forgotten that high-quality lithography is actually and essentially an art. From the time an artist makes a sketch of a color design to the time that the plate is etched, finished and ready for the press, human skill and judgment are the deciding factors between a good and an inferior job. This is particularly true in such highly specialized and complex operations as designing, photography, plate making and color mixing. In the final analysis, a piece of metal lithography is no better than the skill of all the craftsmen through whose hands it has passed.

With resumption of lithographing of metal containers of all types again in sight, a number of merchandising factors in connection with specialty packages need reconsideration.

Any manufacturer of a consumer product who considers going into a specialty container does so because he wants to take his product out of staple category and put it into the luxury class. He may have several reasons for wanting to do this. His product may have a "class" appeal and therefore require distinctive packaging. He may want to create a special appeal for one line of products so that it will become a kind of marketing bell-wether for others. He may want to take advantage of seasonal markets, such as Christmas, or create a gift item.

In any case, a richly decorated metal container will glamorize his product and add a new and important sales factor. Containers of the kind illustrated here are seldom thrown away after their contents have been used up. They are saved, often for years, to be converted into containers for various household and personal effects. Thus, the consumer is willing to pay a higher price because he is making a two-way buy—the product plus the package.

Although richly embellished metal specialty containers are relatively more expensive than most other forms of packaging, the distinction they give a product frequently is as valuable as an old and established trademark. It is not surprising, therefore, that customers frequently become exceptionally exacting regarding even minor details of color and line. Two "case histories" that come to mind will illustrate this point.

In the early Twenties a large packing company put on the market the first finely decorated Christmas box, containing a combination of food products. The box, measuring $12^{1}/_{4}$ by $10^{13}/_{16}$ by $6^{13}/_{16}$ inches, had reproduced on its four-body panels color scenes showing various vistas of the beautiful Mohawk Valley. The cover itself was the skyscape reproduced from a painting by Edward Gay. Considerable quantities of these containers were bought. However, it had been the opinion of

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3—Before the war this magnificent box, done in shades of blue, gold and salmon, was used as a gift package for Crosse & Blackwell products. Such containers, with obvious re-use value, are seldom marred with "sell" copy, in this case the Crosse & Blackwell name appears only on the signboard on the store at right of front-panel scene. 4—A variety of styles and uses for lithographed metal ware. All were reproduced in several colors.

informed people in the trade that the job could not be done commercially because of the fineness of the decoration and the number of colors to be printed. Not only was this job successfully undertaken, but larger quantities were ordered from year to year as the demand for the package grew. This was the first box of its kind ever sold and used for such a purpose and it created a vogue which lasted to the beginning of the present war.

Another job had to do with an internationally known cosmetic and beauty preparation house. After the first World War, this organization came into the American market from England, but for years continued to buy all its lithographic metal containers abroad. These people were confident that no facilities existed in this country to produce the quality of lithography on which they insisted. After long persuasion they agreed upon a trial run. When the job was finished, our American craftsmen had done such a splendid job that the English people agreed that they had never seen finer lithography. It is interesting to note that the engraving and printing plates for this job, seemingly a very simple one, cost more than $1,200. These people were so particular that on many occasions they changed the plates at costs of $500 to $600 to improve minor details.

To a manufacturer who has never experimented with fine lithographed containers, the very problem of selecting proper designs and colors may seem challenging. "What do I know about art?" he may ask. "How do I know what kind of decoration would sell?"

Naturally, this is a fairly common experience, and metal lithographers are well equipped to meet it. In the first place, their art departments have skilled artists and designers who can take an ordinary label—or just an idea about the product—and know how best to present it. Secondly, a vast amount of experience and marketing research has accumulated on this subject and in many cases consumer preferences regarding color and design are already known.

In a related field, for instance, a survey recently showed that housewives prefer a certain color combination and pictorial design for metal canister sets in their kitchens. The Elmo Roper organization, nationally recognized authority on public opinion, made a house-to-house survey to find out what housewives throughout the country wanted in the way of metal household ware. Not only was this information obtained, but new data about latent demands for different kinds of household ware were discovered.

Another survey, conducted this time by two well-known merchandising authorities, revealed what dealers and buyers wanted. By designing containers that would follow these preferences, a ready market is now assured as fast as manufacture can catch up with the demand.

In other cases a manufacturer may find that a design that was highly successful some years back may now require redesigning to restore it to popularity. No matter what the old design may be, a competent designer can take the distinguishing feature—it may be a color scheme, trademark, signature or even style of container—and develop it into a modern, harmonious design and still retain the identity of the product. It is a fact that redesign not only retains its old purchasers, but through its refinement and dignity attracts prospective buyers, who, though acquainted (*Continued on page 170*)

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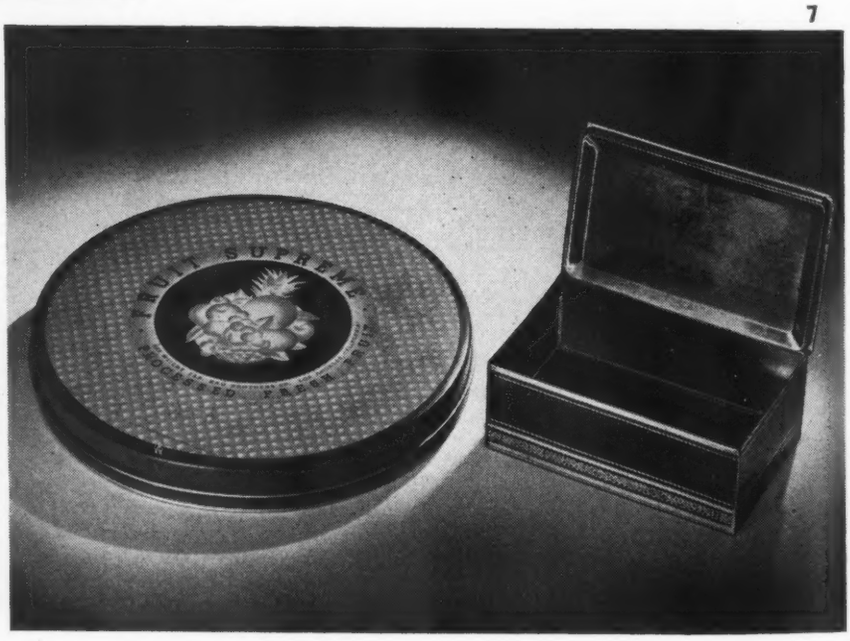
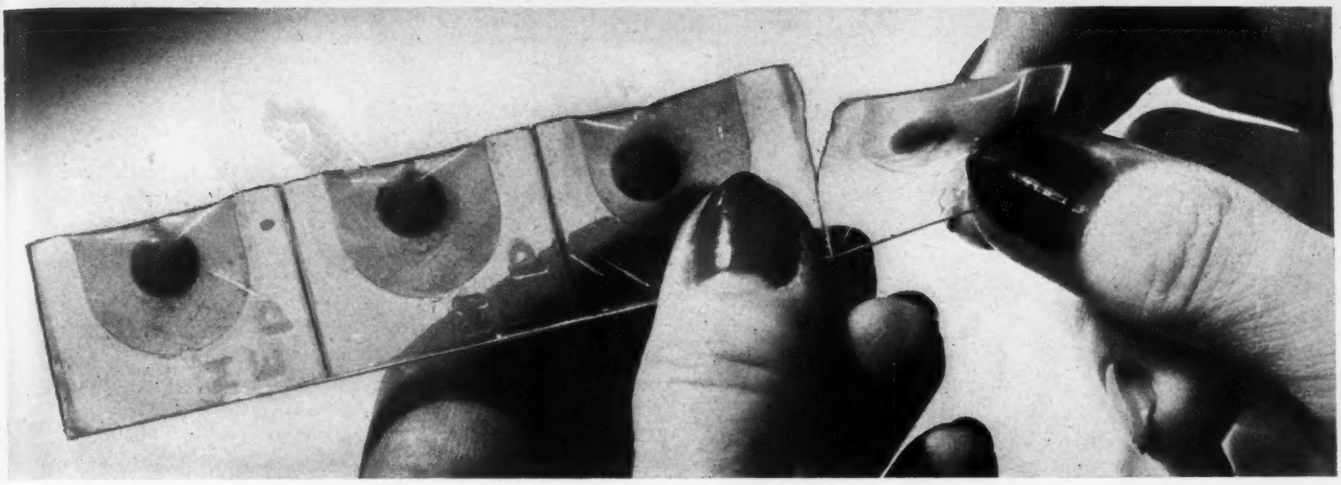


***5**—Decorated metal makes a lasting package for bath powder, immune to bathroom humidity. In order not to mar the gold- and pastel decoration, label information is printed on bottom of can.* ***6**—Lithography as used on a commercial container dramatically presents a natural color photo of the actual process of tapping a tree for turpentine.* ***7**—Two popular styles of boxes for candy and confections; neither is likely to be thrown away. The rectangular 1-lb. box has a snug-fitting double lid, on hinges.*



Daily dose of one mepacrine anti-malarial tablet is separated from polyethylene strip which holds week's supply. The ribbon strip is formed from sheet doubled over, with pockets formed by heat-sealing, as indicated.

Polyethylene film . . . first packaging use

Polyethylene is one of the newest of all plastics, developed in England and introduced in this country in 1944. An article[1] in the December 1944 issue of MODERN PACKAGING described the properties and packaging potentialities of polyethylene, but pointed out that the necessity for using its exceptional electrical properties in war applications had, up to then, prevented the production of a package made of the new plastic.

Now from England comes the story of the first polyethylene package—for a war item so vital that sufficient of the scarce new material was made available for a job which no other material would do so well. It is a good illustration of the interesting packaging characteristics of polyethylene.

After quinine was cut off from the British and ourselves by the Japanese capture of the East Indies, the Imperial Chemical Industries, Ltd., developed the anti-malarial drug mepacrine for use by the British and Allied Forces in the jungles and swamps of the Far East.

Mepacrine was put up in the form of tablets, and the early shipments packed in the conventional manner for the Far East dissolved or deteriorated due to attacks of fungi in the damp of the tropical jungles. Packing experts were put to work but met with no success in trying out conventional packaging materials.

Finally, polyethylene, which was itself a development of Imperial Chemical Industries, was experimented with. This met with immediate success, even though polyethylene had not up to that time been used as a packaging material. The most vigorous tests proved not only that it was waterproof and unaffected by tropical heat, but that the mepacrine tablets wrapped in it could be left lying for months even in salt water and emerge as fresh as when they were packed.

Another advantage of polyethylene was that it could be produced in thin flexible sheets which would retain their flexibility over temperatures varying from that of ice to boiling water. The ability to produce polyethylene in film form permitted the heat-sealing of mepacrine tablets in a unit or one-dosage package. Treatment of malaria requires the use of one tablet a day, and seven mepacrine tablets—a week's supply—were provided in a strip of seven packages.

Usually two separate sheets of film are employed in making strip packages. For mepacrine tablets, however, single ribbons of polyethylene film 2 in. wide are produced in large rolls. The film is cut into lengths sufficient to hold seven tablets in individual pockets, then the film is folded over to form a double ribbon 1 in. wide, into which the tablets are inserted and sealed.

Since there are no practical known solvents for polyethylene up to this time, it became a rather difficult problem to seal the tablets into individual compartments as shown in Fig. 1. Polyethylene is unusual in its insolubility and inertness to chemical reagents. No active solvents, either organic or inorganic, have been found for use on the material at room temperature. When applied at high temperatures, solvents will readily and completely dissolve polyethylene. It developed, however, that the material is heat-sealable and this method of closure was employed in packaging the mepacrine tablets.

Fortunately, Genatosan, Ltd., a company in England, had suitable machinery on hand which, after slight adaptations, was able to heat-seal the tablets into individual purse-like pockets with the use of a special grade of polyethylene 0.004 in. thick. During the heat-sealing the letters "MEP" for mepacrine—are embossed on the package.

While information from England did not disclose this, analysis shows that in heat-sealing, the strip of polyethylene is overlaid with a similar strip of PT cellophane, which forms the exterior surface of the package. This probably is done to prevent the polyethylene sticking to the jaws of the heat-sealer; it would not appear to be necessary for any other reason.

Millions of these mepacrine tablets have been packaged weekly in polyethylene ribbons. Each day one pocket containing the daily dose can be torn off the ribbon strip, leaving the remaining tablets safely protected from any heat and moisture. Polyethylene, there- (*Continued on page 170*)

[1] "Polyethylene," MODERN PACKAGING, December, '44, pp. 122–123.

Thermometers for baby

With the lifting of many of the packaging restrictions comes a wave of gift packages which would not have been possible a year ago. One of the latest to appear on the counters in time for the Christmas trade is this cradled thermometer put out for nursery use by the Ex-Ell Instrument Corp. of Brooklyn, N. Y.

The cradle is made of three pieces of paperboard—the long section being one die-cut piece scored to form the bottom and two sides. The ends are die-cut to the desired shape and slotted to fit over tabs extending from the sides. The construction is simple and assembly is done by hand. A die-cut platform of decorated paperboard holds the thermometer and plastic case.

Traditional pink and blue is the general color scheme with the animal decorations in red and white. The trade name, "Tempy-Taker," appears on each side of the cradle but any other copy is kept to a minimum because the container is meant to be used as a toy after the mother has removed the instrument.

A gray chip-board carton is used as the outer package to protect the item until it reaches the counters.

CREDITS: *Designer, Norbert Jay, New York. Cradle and carton, Morris L. Lewy & Co., New York, N. Y.*

DESIGN

Dressed up fruit cake

Grove Crest "Rum and Brandy" Fruit Cake, distributed by the S. & F. Sales Associates, is chalking up more sales every day, selling in the packages shown here. In the foreground is a one-pound gift-wrap cake and in the center is the two-pound cake in a lithographed metal container.

The one-pound loaf, in a tray formed from a die-cut piece of fluted, waxed paper, is overwrapped with cellophane and slipped into a window carton gaily decorated with sketches of the fruit in the cake. The color scheme of both of the packages is rose-gray and maroon.

The mailing carton in the background has a label which is decorated with the same theme and provides space for writing in the address of both the sender and the recipient. The cake is purchased from an open sample and, in most cases, the store handles the mailing.

Easel-mounted counter cards promote the sale of these gift packages. Reverse white on the maroon top of the display draws the eye to the counter and the copy, which appears on the lighter portion, varies according to the cake being displayed.

CREDITS: *Folding cartons, Robert Gair Co., Inc., New York. Designer of display, Jack Keller, New York. Lithography of displays, Montauk Printing Co., Brooklyn, N. Y.*

Clarion call

The newest DuBarry lipstick shade, "Clarion," has a package designed particularly to emphasize its name. The long, fibre tube at the left has a gay design in bright and light blue, red and gold. The metal-cased lipstick at the right fits down into the large tube and is topped by the smaller tube (center) which contains several days' supply of face powder. Although the unit promotes the lipstick, it was considered an excellent medium to introduce the harmonizing shade of powder.

The powder container fits snugly into the other tube and its gold cap rests on the outer edge of the outside package allowing it to do double duty as a closure. The tube used for the powder sampler is interesting in that it is an adaptation of the containers used by some of the airlines for their salt and pepper shakers. Under the gold cap, the opening is covered with a pull-tab paper disc. Under the tab is another disc which has an opening only $^{3}/_{16}$ in. across allowing only a small quantity of powder to be dispensed.

The little felt angel in the background was attached to the tube only for introduction to the press, but the customer undoubtedly will be highly pleased with her quota of angels which float ethereally all around both containers.

CREDIT: *Paper tubes, Cross Paper Products Co., N. Y.*

HISTORIES

Sheets of polish

A chemically-treated paper to clean household silver, manufactured by The Munising Paper Co. of Chicago, is handily packaged in a hang-up envelope for convenient use.

The inner envelope containing the 24 sheets is of open-top construction and provided with a hanging tab. The only printing which appears on this portion of the package is fairly complete instructions in large, legible type. The outer flap-closing envelope uses a strip of cartoon-type drawings to illustrate product use more vividly.

Twenty-four envelopes are packaged in a display carton which opens to form a self-service counter unit for the grocery or hardware store. This carton, when set up, has an open front allowing full visibility of the envelopes.

The attractive design was achieved by the use of only two colors. Background is red, lettering is black, and a three-color effect is obtained by decorations in halftone.

Since the idea of polishing silver with paper is fairly new, the strip of drawings which illustrate use is printed in black and red on white for better visibility.

CREDITS: *Display, Container Corp. of America, Chicago. Envelopes, Gaw-O'Hara Envelope Co., Chicago. Printing of envelopes, Runkle Thompson Kovats Inc., Chicago.*

Compartments . . . and transparent

Many products are such that they require a compartmented box. This may be essential to keep each item separate for convenience in re-use, such as small pieces of hardware, precision parts and instruments. Or it may be for purely display purposes, such as compartments to house gift assortments of cosmetics—jewelry sets of matching ear-rings, clips and bracelets. Even several pairs of hosiery are often packaged in compartmented re-use utility boxes as gift items and assortments of confections are sometimes more attractive in partitioned boxes.

At this time when manufacturers are planning new lines following the change from war to peacetime merchandising and when rigid transparent materials are returning for civilian use, many firms are looking for transparent containers of this type—particularly those which can be made to hold a variety of items, each item in a separate section.

To have such containers specially designed for a particular use often makes the cost prohibitive. However, many companies have solved this problem by adopting transparent containers that can be obtained in a number of stock forms, but which are adaptable by the arrangement of partitions to a number of different purposes.

The containers are formed or drawn from several types of rigid transparent thermoplastic sheeting. The dies are provided with ribbing at various intervals. Partitions are introduced by fitting flat pieces of transparent sheeting cut to proper size and of proper thickness, into the ribbed grooves similar to the way you can divide your desk drawer into compartments by inserting the wooden partitions supplied with the desk into the grooves provided for them.

(*Page 110*)

Perhaps you package an assortment of items that require a partitioned box. The story and illustrations on these pages show how many manufacturers of products as different as thread and ear plugs have solved their problems by using rigid transparent boxes with transparent partitions

These basic type stock boxes can be supplied in any compartment arrangement as long as the partitions follow the ribs. The outline illustration on the opposite page shows a few of the arrangements that have been used for standard type boxes. When a specific requirement is not served by any of these arrangements, the user may have a box custom built to suit his purposes. Such instances, however, require special dies, but the cost of these dies can be absorbed if the run warrants and can be quickly absorbed by additional re-runs.

The covers of the boxes are of telescope type to fit over the transparent base. Occasionally a non-transparent base of paper or metal is used with only the lid transparent if this treatment is more advantageous. The lids of the boxes may be hinged. Metal is used for the hinges. The front of the lid and base are sometimes bossed to effect a snap-tight closure.

Illustrations on these pages show how these boxes have been adapted for many uses. For example, Wright Aeronautical Corp. has adopted a simple two-compartment box for ear plugs. A transparent box gives a clean appearance for a syringe made by the Rea Serum Co. The syringe is well protected, is carefully held in place by the interior fittings in the box, which also offers an efficient, permanent receptacle for the instrument.

Many is the traveler who has welcomed a convenient sewing kit. Gudebrod Bros. Silk Co. has found new outlets for its sewing threads by assembling a small kit of miniature spools of silk in various colors with needles and thimble, and packaging it in one of these transparent boxes approximately 4 by 3 in., just the right size to tuck away in a suitcase. It makes an attractive gift item.

The Ralph C. Coxhead Corp., manufacturers of the "Vari-Typer," an office machine which has a universal typewriter keyboard and is equipped with changeable type faces and spaces, uses these transparent boxes in two sizes—a small one which holds 6 type plates and a large one holding 16 type plates. Aside from the advantages of compactness and durability, the company states that they selected these containers to enable the Vari-Type operator to see the plates without opening the cover.

The boxes have been quite extensively used for nuts, bolts and springs. They enable the user to see and pick out various sizes immediately. Because of the partitions each size may

1—Two-compartment box for ear plugs adopted by Wright Aeronautical Corp. 2—A 12 section box provides a convenient kit for 12 sizes of Diamond G. Spring Lock Washers. Key to kit is printed on inside of box lid.

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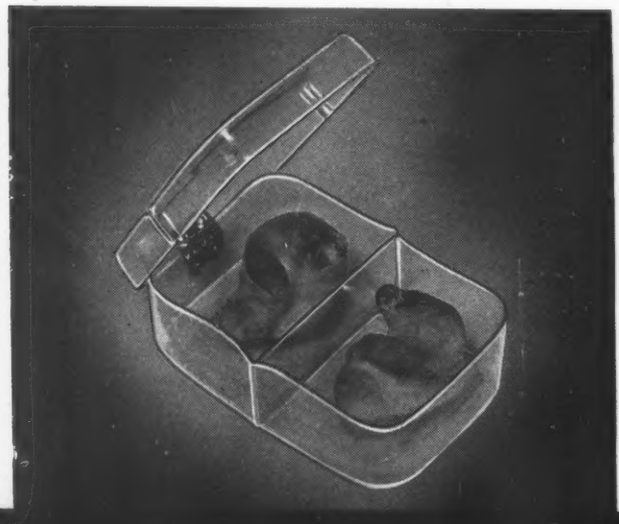

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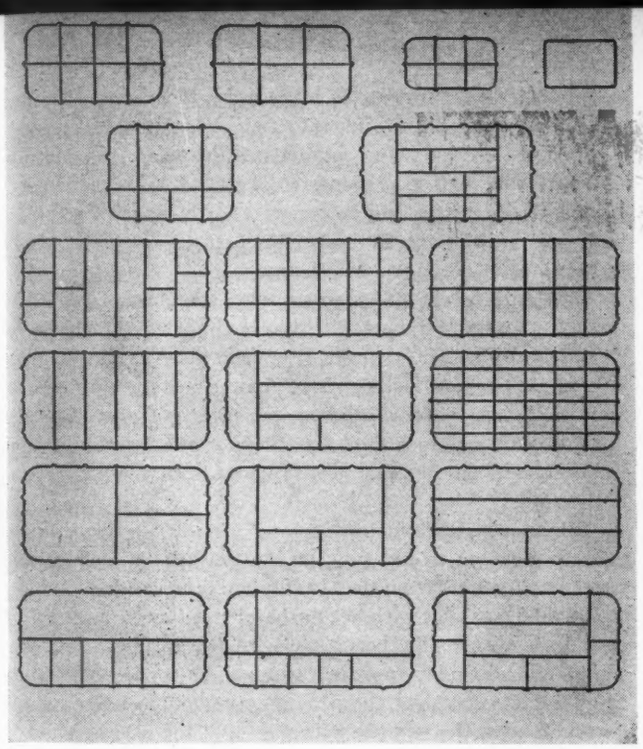

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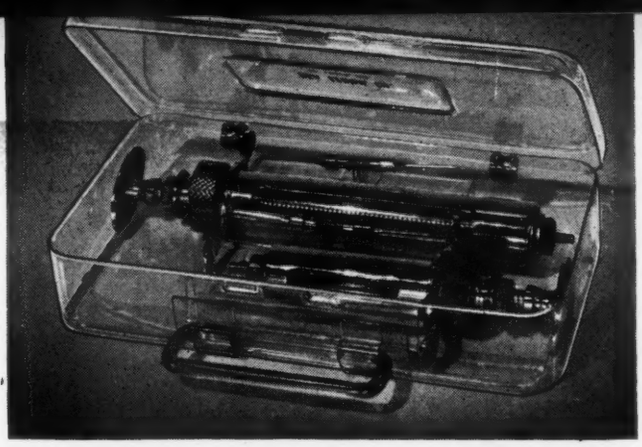

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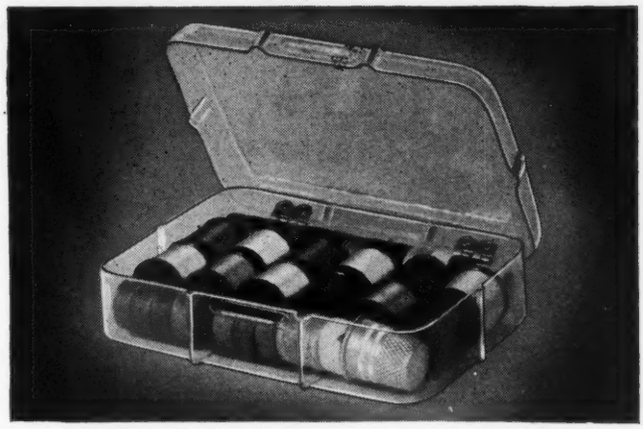

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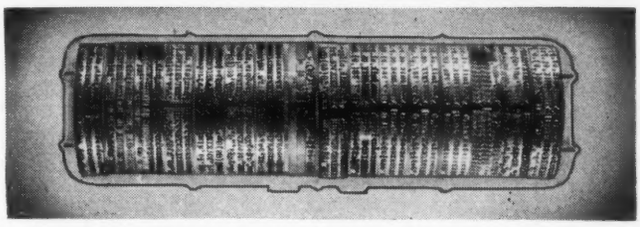

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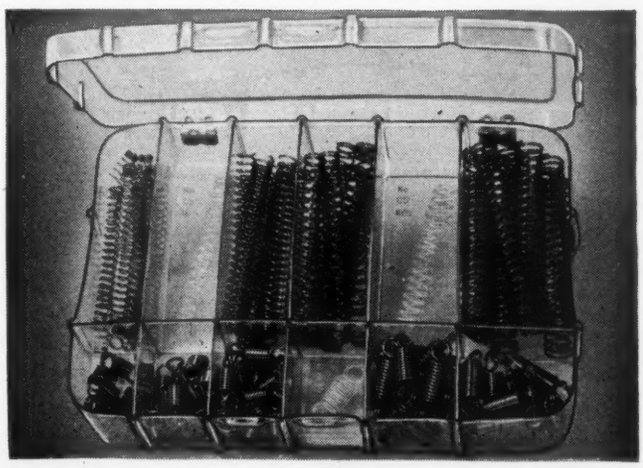

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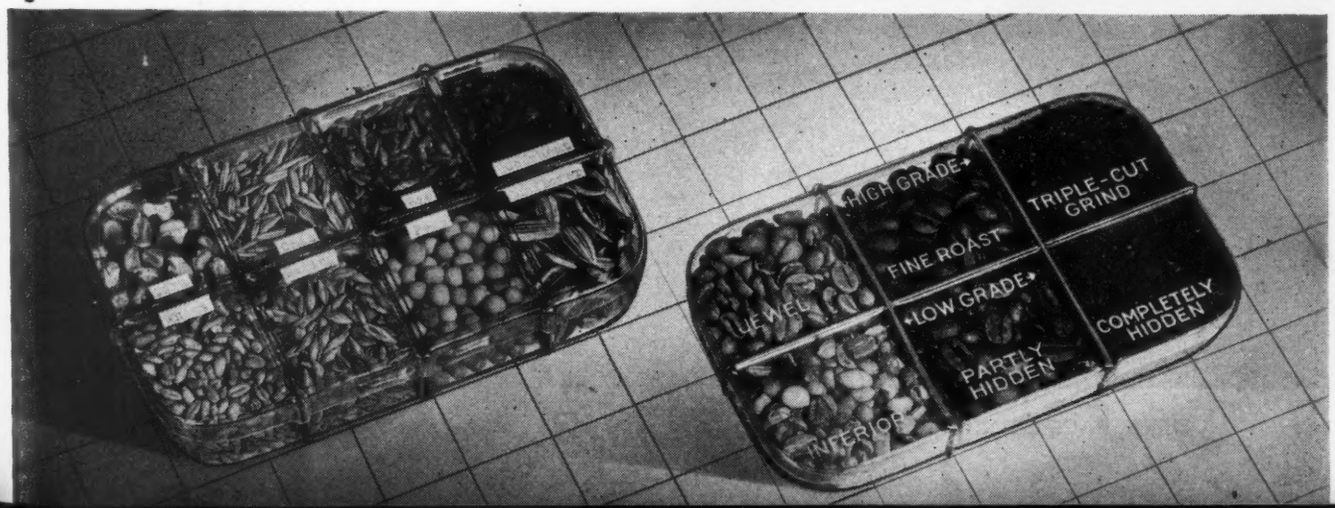

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3—Diagrams of partition arrangements. Any arrangement may be used if partitions follow ribs. 4—Rea Serum Co. uses one of these boxes to house a syringe in a re-usable container. 5—Gudebrod Bros. Silk Co. assembled spools of silk and sewing accessories for a transparent mending kit. 6—Sets of type faces for the Vari-Typer, an office typewriter with changeable type faces, in a transparent box, enables operator to see type plates without opening box. 7—Small metal parts of various sizes can be neatly housed in compartmented box. 8—These boxes of seeds and coffee samples show advantages of compartmented transparent container as demonstration kit.

be stored neatly in its own compartment. Many boxes of this type have been used for small machine assemblies.

Transparency also offers the possibility for housing salesmen's samples and for demonstrator kits. The boxes containing various types of seeds and coffees illustrate such a use. The partitions keep each variety in its individual section.

The versatility of these containers will undoubtedly widen their use to many fields as soon as the suppliers of transparent materials get into full production for civilian industry.

CREDIT: *Boxes made by Utility Box Division, Shoe Form Co., Auburn, N. Y.*

(Page 111)

Success Story from Cape Cod

Everyone at sometime or other has cherished the idea of having a business of his own. Now more than ever, with returning veterans and workers released from war jobs, there is keen interest in how to start a small business.

In the case of some of these infant enterprises, the package is the key to success. No better current story of such packaging in the toiletries field could you find than that of how Thomas G. and Marion H. Blakeman started their Bayberry Mist line. The origin of Provincetown's famed Commercial Street endowed it from the start with a romantic background but it took plenty of Yankee ingenuity in addition to the lure of Cape Cod to build the line into a successful business.

Thomas G. Blakeman is an artist—known for his etchings and portraits. While he painted and etched, his wife, Marion, busied herself with a summer sportswear business, known far and wide on the Cape as the Personal Appearance Shops, one in Provincetown and one in Orleans.

While catering to the summer colonists, she noticed there was a big market for small gift items—and that the gift items should be something definitely associated with the locality. Others shops were selling ships' lanterns, reproductions of Sandwich glass, witches' globes and other gadgets. She did not want to compete with them. She noticed also that among the best sellers in her shop were various lines of colognes and bath powder.

"Why not," she thought one day, "put out our own cologne —a scent which would suggest the tang of bayberries and sweet fern, of wind from the sea through pine woods?"

She talked it over with her husband and together they conceived the idea for Bayberry Mist. A leading perfumer was commissioned to develop the formula. Then came the packaging. The success of the product, the couple knew, would depend a great deal on the package—and the package had to tell the story. The artist husband put his artistic imagination to work with his wife's ideas of practical business.

The package that came forth is expressed in a Bayberry Mist promotional folder today as "an odd bottle, etched as if by sand and of the textures of bottles rolled by the surf upon the shore."

The etching gives the bottle an overall frosty appearance

1—Promotion of Bayberry Mist depended to a large extent on the package. The entire line is in keeping with its Cape Cod character, decorated with maps, sailing vessels and sea gulls. Cape Cod scallop shells and fish nets are used as a container for sachets. Men's line, known as Bayberry Mist-er, added this year.

through which the cool green color of the cologne shows like the cool green of the sea on a sunny day. By use of silk screen process for applying the stopping-out varnish, the name, Bayberry Mist, and a decorative treatment of seagulls are left clearly transparent on the bottle in script lettering so that product name is visible at a glance.

Stock bottles are used for the package, but the etching provides a distinctive appearance and represents months of search to find a company in Brooklyn which could do such etching in quantity. A metal-lined, turned-wood closure gives the effect of pine wood.

These packages were introduced in Mrs. Blakeman's Personal Appearance Shops in 1939. The packaging was done in a basement on the waterfront. The only filling equipment was a pitcher and funnel. Artist and writer neighbors came in to help glue the metal liners into the wood caps and to tie the yellow silk tassels around the bottles to give a decorative note.

The sales jumped so fast the Blakemans and their one helper had to work day and night to keep their hand production at a level to meet the demand for sales.

Four thousand bottles were sold the first year. News of the Bayberry Mist cologne spread to Boston. A merchandise scout from Filene's came to see Mrs. Blakeman one day about the possibilities of introducing the line on their cosmetic counters. Inquiries came from New York store buyers. The Blakemans added talcum powder to their line. Then came bath salts and an after-shave lotion, because they noticed that the fresh tangy scent of Bayberry Mist was being purchased as much for men as for women.

Each new item meant a new package problem—containers, labels and design in character with the products. Natural wood containers cylindrical in shape were selected for the bath salts and talcum powder. Label designs drawn by Mr. Blakeman carried out the Cape Cod idea with maps of the peninsula, ships and seagulls carefully arranged with sprigs of bayberry and printed in one color, green, on a wood-grain paper to suggest the idea of early New England pine paneling. Always in mind was the aim to use packaging supplies that were not too expensive, yet would provide the distinctive appearance required for a product which depended to a large extent for its acceptance on the locality appeal of its package.

All was easy until the war. Then began the difficulty of obtaining containers and supplies and there were transportation difficulties due to the curtailment of train and motor truck facilities on the Cape. But orders continued to pour in. Shortages and rationing among dealers for well-established lines gave these newcomers a chance.

"We decided if we were to get sufficient containers and packaging materials," said Mrs. Blakeman, "we would have to move the business away from the Cape, temporarily."

The move was to New York, where the manufacturing could be done as closely as possible to sources of supply. While her husband put aside his paint brushes to do essential war work, Mrs. Blakeman carried on with the Bayberry Mist business down on Christopher Street in New York's Greenwich Village.

Accounts now number more than 500 in leading stores throughout the country, in post exchanges and one store as far away as Hawaii, although the line is strongest in New England and in summer shops patronized by tourists along the North Atlantic coast.

The line now includes cologne, bath salts, talcum powder and sachets—as well as a combination package designed to look like a book—with a map of Cape Cod and a fishing boat

2—*The Bayberry Mist bottle is a stock container but etched to give the appearance of a bottle that has been rolled and tossed by sands and surf. Name and decoration are achieved by use of stopping-out varnish which leaves this part of the surface transparent. When cartons were no longer available, printed wood-grain paper wraps, reinforced with pieces of scrap corrugated, cut to size and scored, made a tamperproof package that looks like a carton. See photo opposite page.*

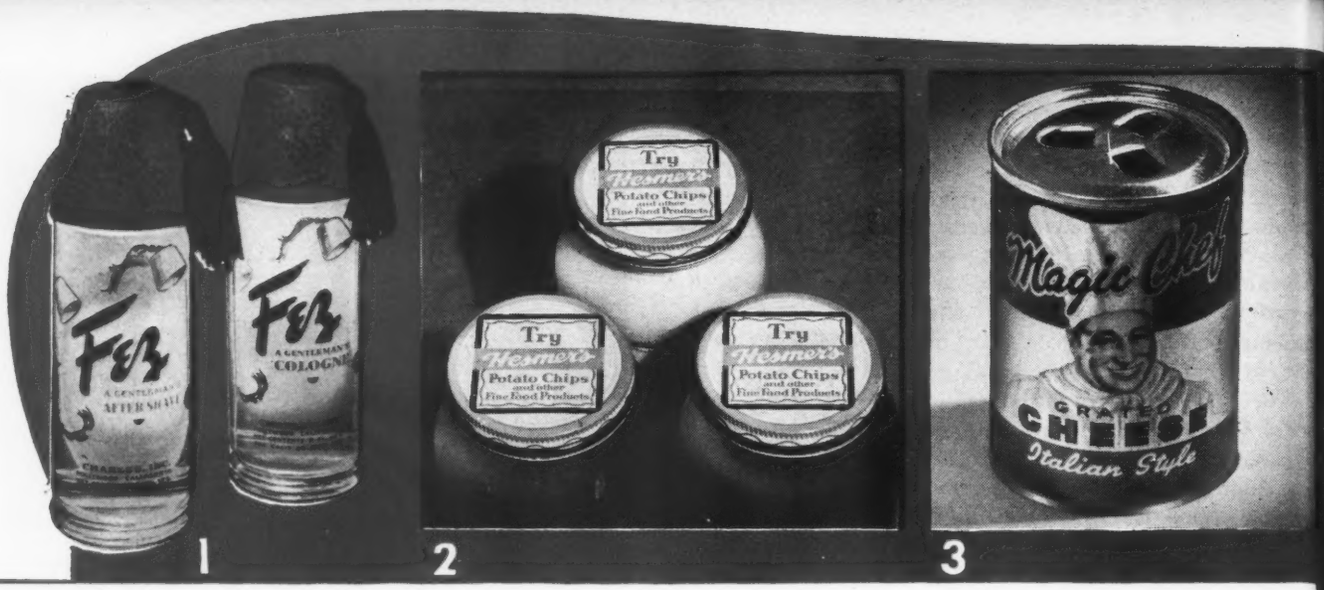
on the cover—for the two men's products—shave lotion and talc, sold as "Bayberry Mist-er."

Mrs. Blakeman's advice to anyone starting a small business can be summed up in one sentence—"Roll up your sleeves and do a lot of the work yourself." She still does a great deal of the filling and packing and she has spent endless hours scouting for package supplies. "Even with the shortages suitable materials could be found," she said, "but it takes a heap of looking and an open mind. You can't get your heart too set on a particular paper, or bottle cap or container. You must learn to adapt what you find to your product."

One of her container problems was solved by the use of scallop shells, a total waste on Cape Cod wharves and brought from fishermen for a song. These are washed and scrubbed, loaded with a half dozen sachets, wrapped in cellophane, then covered for decoration with pieces of fish-net. They have been very popular along with the other items in the Bayberry Mist line and the shells have a re-use purpose for ash trays.

When cartons were unavailable, she devised a wood-grain paper wrap for the bottles, reinforced with scrap pieces of corrugated board cut to size for protection. The wrap on the cologne was planned to represent an antique Cape Cod cupboard on which are pots of bayberry and the model of a sailing vessel—all done with a line drawing and one color printing. When the bottle is protected in corrugated and the wrapper glued in place, the effect is that of a wrapped carton and the package is tamperproof. This innovation was the inspiration for the combination "book" package previously mentioned for the men's line—except that in this case the design is changed. Brown suede paper was found available, so labels for the men's talcs achieve a good masculine look.

Most of the packaging line (*Continued on page 172*)



1 2 3

Packaging Pageant

1 A Near-Eastern note enters the men's toiletries field with the advent of "Fez," a cologne manufactured by Charles, Inc., of Los Angeles. The wooden closure is shaped like the traditional Turk's fez and flocked in red to further the illusion. A black tassel completes the picture. The fez is repeated in an all-over design in red on the bottle and again in black on the red outer folding carton. Closures, Page Products, Los Angeles, Calif. Tassels, Schoen Trimming Co., New York. Bottles, Swindell Bros., Baltimore, Md.

2 Hesmer's Food Products, Inc., Evansville, Ind., uses the space provided on the top of its jar caps as "billboard" space to advertise the other good foods in the company's line. Lithographed in blue and red, the cap is designed to attract the shopper's eye both in the store and in the home. Caps, The Aridor Division, Ball Bros. Co., Muncie, Ind.

3 A lap-seam fibre can with metal ends is used by Magic Chef for Italian style grated cheese. The can is air-tight, treated to make it greaseproof and is provided with a shaker top. The recently redesigned label has a red, white and green background to emphasize the Italian style of the product with the brand name brought out by the use of the "Magic Chef" logotype. Fibre can, American Can Co., New York, N. Y. Labels, Rossotti Lithographing Co., Inc., N. Bergen, N. J.

4 Tooth powder's back in metal. After wartime container struggles one of the first products to return to the market in a prewar package is Calox, the McKesson & Robbins preparation. The container is the conventional two-piece round metal can with a plastic closure and the design is essentially the same as it was before the war.

5 Glistening brown jugs with bright red Marco Polo caps hold the newest line of men's toiletries—Cargo. The outer cartons are covered with a replica of the navigation charts used by old sea traders; the interiors are lined in lacquer red. Under the trade name on the face of the jar is a design carrying the points of the compass. The shaving soap is in a brown stoneware jug like an old grog cup. Caps, Maico Products Co., Minneapolis. Labels, Meyercord Co., Chicago. Cartons, Waldorf Paper Products Co., St. Paul.

6 A single piece of paperboard, die-cut and scored, forms this open-face carton for a set of three baby bibs for the Lee Ann Sales Co., Rochester, N. Y. Meant primarily for a gift item, the carton is attractively printed in a rose and blue design—the open face allowing visibility of the product. Designer, Erik Hans Krause, Rochester, N. Y. Cartons, Rochester Folding Box Co., Rochester, N. Y.

7 This container for an assortment of light bulbs is the outcome of a consumer study conducted by General Electric. As a result of the consistent use of the theme "There is a right lamp for every lighting need," it was found that many consumers are now buying lamps in assorted sizes, at one time. This new GE "Handy Household Cabinet" was evolved after the study pointed out the assortment usually purchased. Container, Robert Gair Co., Cleveland, Ohio.

8 In redesigning its cleaner package, Turco Products, Inc., strove for more refinement plus eye-appeal, yet the reconversion had to be made without the complete loss of an established trade identity. Family resemblance was retained by means of the turban on the figure who is now treated in a light-hearted way with more action. More delicate colors were used and the name changed to "Tay," as it was considered easier to read and remember. The original name, "Turco," is retained at the bottom of the box.

9 Daggett & Ramsdell welcomes back the cosmetic gift sets with a fairly complete Mountain Heather line ready for the holidays, two of which are shown here. Both are covered with pink and turquoise paper decorated with garlands of the heather. The one at the left holding three pieces, has a hinge top while the one at the right has an interesting open front.

10 The Banana-Rette Corp., distributors of "Banana-Rettes," a breakfast food, and Banana Wafers, has adopted yellow and black as the color scheme for both of its new packages. Since the ripe, sweet fruit are these colors, it was felt that the combination was the best to put across the sales story. The wafers are packaged twelve to a glass jar with a tamperproof seal. Seals, The Celon Co., Madison, Wis. Bottles, Brockway Glass Co., Inc., Brockway, Pa.

CALOX
TOOTH POWDER
CALOX
TOOTH POWDER

4

MEN'S
CARGO
TOILETRIES
CARGO
CARGO
CARGO
CARGO
CARGO
CARGO

5

BEAUTY BIB SET

6

POPULAR HOME ASSORTMENT
GENERAL ELECTRIC
8 GENUINE LAMP BULBS
2 100 WATT BULBS
2 60 WATT BULBS
2 40 WATT BULBS
70¢ PLUS TAX

7

TURCO
CLEANS
MAKES DIRT GO
Tay
CLEANER
TURCO

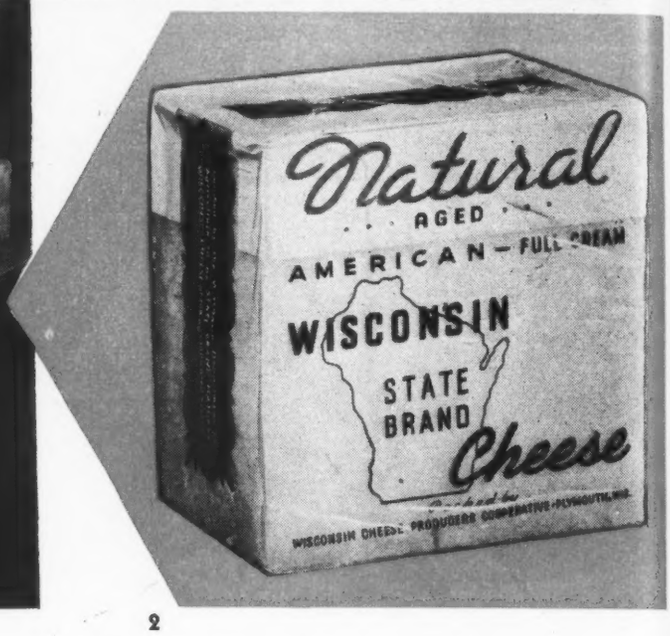
8

9

MADE WITH PURE BANANA FLOUR • NET WT. 7 OZS.
BANANA-RETTES
The HEALTH FOOD
MADE BY THE BANANA-RETTE CORP. • NEW YORK, N.Y.
CONTAINS 10 WAFERS
Stacum
BANANA WAFERS

10

What about Pliofilm? . . it's coming back



1 2

1—One of the great virtues of Pliofilm is that it readily forms a strong self heat-seal; no coatings are needed. 2—Pliofilm made a successful unit package for processed cheese and was in great demand for that purpose before the wartime scarcities. All the Pliofilm packages illustrated on these pages were marketed prewar.

The situation of Pliofilm, the rubber hydrochloride packaging film, is perhaps unique in packaging history. Expanding rapidly in use just before the war and just beginning to break into some important new food fields, it was suddenly cut off, literally overnight, when the Japs cornered the crude rubber supply in the Pacific.

Pliofilm cannot be made of synthetics; it must have natural crude rubber. When it became apparent that we would get no more natural rubber for the duration of the war, but must live off an alarmingly small national stockpile for an unknown period of years, it was obvious that civilian use of the film had to be stopped immediately and completely.

So, for nearly four years, this promising new packaging material has been completely absent from the food packaging scene. Whatever quantity was produced during the war went for the anti-corrosion packaging of airplane engines and spare parts for the Army and Navy.

Now Army and Navy contracts have been cancelled or drastically slashed, and Pliofilm needs only one thing—in addition to formal lifting of Government restrictions—to bring it back into the packaging picture in full force: a resumption of the flow of regular shipments of rubber from the Pacific to Goodyear's processing plants in this country.

The amount of natural rubber remaining in the national stockpile is too dangerously low to permit it to be drawn on for this purpose. New supplies must come in before manufacture can be resumed on a commercial scale. However, the first shipment has already arrived—42-odd tons from a liberated Goodyear planatation in the Philippines, none of which will be available for film manufacture—and the good news from Goodyear officials is that within six months rubber shipments should be near normal and Pliofilm again available for any desired use, subject to any remaining restrictions.

During the period starting in 1938 and ending with Pearl Harbor, there was rapidly increasing use of Pliofilm as a protective wrapper in the food industries for the packaging of cheese, meat, frozen and dehydrated foods, coffee, liquid products, citrus fruits, vegetables, crackers, cookies, nut meats, popcorn, potato chips, noodles and confections—ranging almost the entire field of both hygroscopic and moisture-laden materials.

The rubber-derived film is not the lowest-rated in water-vapor transfer, but its rate is sufficiently low to take care of most food products. It is said to be odorless and tasteless. It is strong, transparent, and one of its greatest assets for packaging is that it is readily heat-sealable, without adding coatings, at 250 to 300 deg. F., forming a strong, welded bond. For vegetable and fruit wrapping, tensilized Pliofilm has the advantage of passing carbon dioxide outward and oxygen inward rather readily, while holding water-vapor in.

The war has of course provided a wealth of experience in the use of Pliofilm as a water-vapor barrier in dehydrated Method II packaging of precision instruments and parts. It will probably continue to find some use in this field. Even before the war, the film was being used for many non-food products. A typical 1940 list revealed its use on such products as abrasive discs, bandages, batteries, books, buttons, cosmetics, detonating fuses, dolls, drugs, fire extinguishers, flowers, insurance policies, motor oil, plant food, plastic compounds, roofing materials, seeds, textiles and window boxes.

Right now, in the various industries which have been denied even so much as a glimpse of Pliofilm since 1942, there is a backlog of interest as large as the backlog of orders which awaits the manufacturers. Packagers are asking what they can expect of Pliofilm when it comes back—what new formulations or new qualities will be available, and what new directions of use it will take.

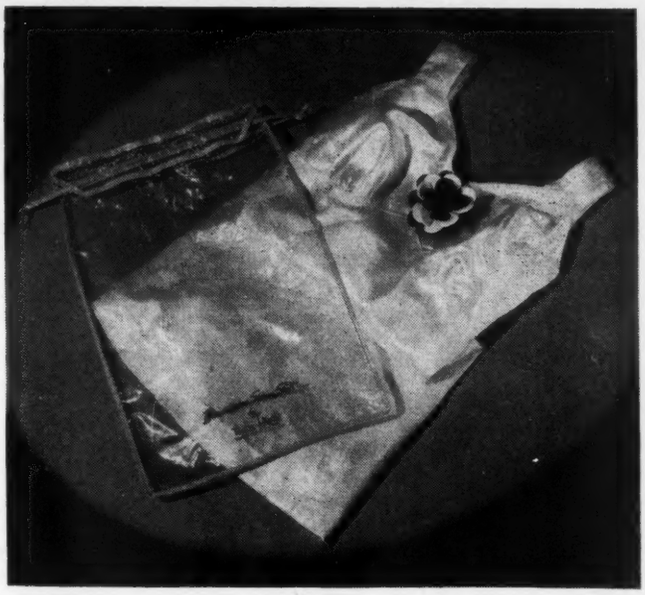
These questions cannot yet be answered very specifically. Wartime improvements of the material have generally taken the line of further refinements of existing characteristics, but properties cannot be accurately assayed and presented in tabular form until the new shipments of rubber are in and processed. Perhaps the outstanding wartime developments have been in machinery for handling Pliofilm—particularly in the type of stretch-wrapping which is peculiar to this material and which is especially interesting because it makes for great economies in the use of film.

Special machines for the high-speed stretch-wrapping of fruits and vegetables are now in the final stages of development. Oranges already can be wrapped at the rate of 500 a minute by a machine which utilizes the thermoplastic and elastic qualities of the film, providing a transparent, heat-sealed, skin-tight membrane on the fruit and extending its shelf life by a period of months.

All indications are that Pliofilm will move most aggressively in to the whole field of citrus fruits and perishable vegetables. This campaign has as its background research conducted simultaneously at the Agricultural Experiment Station of the University of Florida, under the direction of Dr. Arthur L. Stahl, and at the Goodyear Research Laboratories under Dr. L. B. Sebrell. These studies, which have continued during the war, are said to have established that Pliofilm is extremely effective in extending the life of such perishable items as oranges, grapefruit, lemons and tangerines, as well as celery, asparagus, broccoli, lettuce, tomatoes, corn and other vegetables.

In the vegetable field, according to the Goodyear people, machines will eventually appear to make field-wrapping possible, eliminating the trimmings, stalks and roots included in the present practice of ship- (*Continued on page 172*)

3

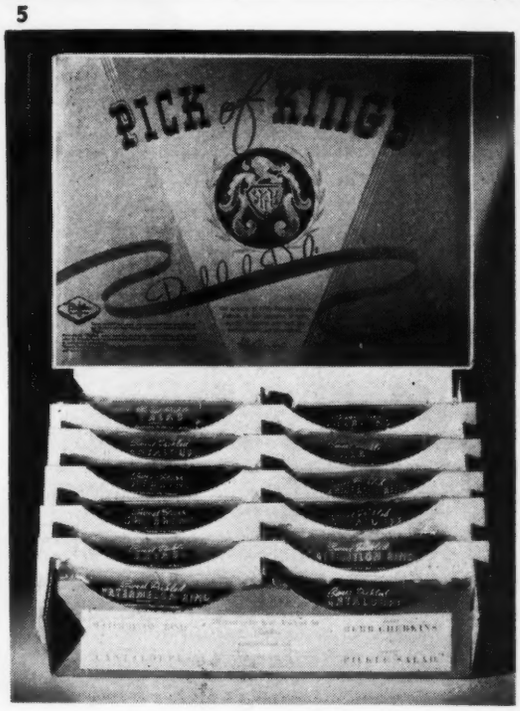


4

The 2-Course Breakfast
ORANGE CRUMBLES
CEREAL AND ORANGE JUICE
WITH VITAMINS A B1 C AND D
A BLEND OF WHOLE WHEAT OAT BRAN AND CORN FLOR WITH SUGAR SALT AND DRIED ORANGE JUICE
FLORIDA

6

5



3—Advantages of Pliofilm for permanent dust- and moisture-proof container for articles such as lingerie and swim suits were exploited by some manufacturers. 4—Pliofilm can be laminated to other materials. This package, heat sealed top and bottom, is Pliofilm laminated to paper. Visibility was not wanted. 5—Pliofilm, with its tight heat seal, holds liquids, moist products successfully. Interesting group display featured Pliofilm trademark on back panel, explained its protective qualities. 6—Peanuts were marketed in this protective bag; decorative top strip carries sales message.

PAINT LABELS that sell name and product

1—Sapolin took a hint from its own slogan, "Make old things look like new," to bring all its old packages into this colorful new family (above) that says "paint" at a single glance.

Fast and furiously as civilian industry gets into its stride comes news of many re-designs. Just announced in the paint field are the new labels for Sapolin, a project which is keyed to modern merchandising trends.

Sapolin decided it was time to take a hint from its slogan, "Make old things look like new," to bring all its package labels into a colorful family design—easy for dealers to sell and easier for the consumer to buy. They called in a leading independent designer and assigned him the task of tying in all the company's labels with an overall pattern that would retain as much as possible trade name remembrance value.

The program is an excellent example of changing a group of labels which previously had considerable recognition value but no modern sales punch to say "paint" and "Sapolin" at one instant glance.

Chief elements of the new labels are: (1) A simple pictorial treatment showing a huge brush that suggests paint the moment you see it. (2) Special hand lettering of the trade name Sapolin which emphasizes the "o" in the word—for two reasons—to provide the trade-name identity that could be more easily protected and to give emphasis to the "o" in the word for correct pronunciation. (3) Basic field color schemes to differentiate the four groups of consumer products the company makes in the paint field: red for enamels, green for interior finishes, brown for floor enamels, maroon for varnishes and stains, blue for exterior finishes. (4) Careful attention to a large black and white panel giving easy-to-follow directions and informative data. Further sales value is achieved by pictorializing the uses for the product. For example, for screen enamel, the wire mesh of a screen is shown on the brush stroke. For varnish, the brush stroke simulates a varnished wood grain. For stove pipe enamel are pictures on the brush stroke showing uses for this product on an automobile fender, for an oil burner as well as stove pipes. For exterior finishes, house and exteriors of other buildings appear on the brush strokes. For interior finishes, the illustrations indicate uses for walls, furniture, etc., suggest ways to spruce-up house.

A great deal of attention was given to the informative panel according to Richard Eckhart, vice-president of the company and director of research, who supervised the packaging. The company is proud of superior products and so that users may apply them to the best advantage they are given explicit in-

formation about the properties of the paints, what they are used for, how to prepare them and how to apply them. Great pains were taken, therefore, in preparing direction copy which has been arranged for easy legibility. Also included is a fire clause for the protection of seller and user. In every case for these panels, these suggestions are printed in black on white, because the company felt that makes them easiest to read and follow. These data appear in a large shield.

Provision for designating the various products, color names and color numbers is made on the paint brush where they are printed separately for each product. At the left of the design, ample space now carrying promotional copy, has been provided to allow for additional (legal) data as required, such as formula, contents, name of manufacturer, etc.

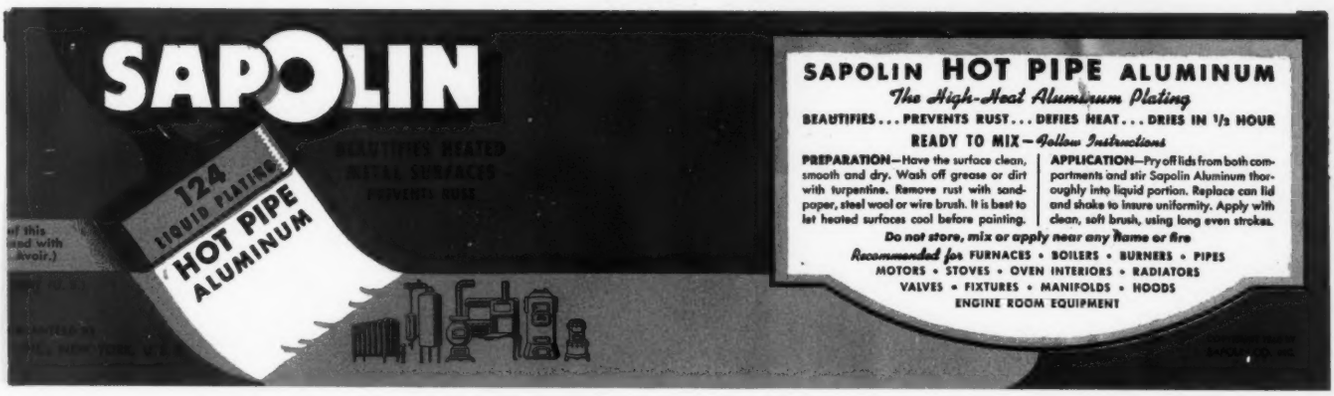
The new labels appear on more than 200 products, including all sizes: 1/4 pt., 1/2 pt., quarts, gallons, 2 gals., 5 gals., which means development of a thousand or more variations to which the design has been adapted. The new design is also used on lithographed containers the company uses.

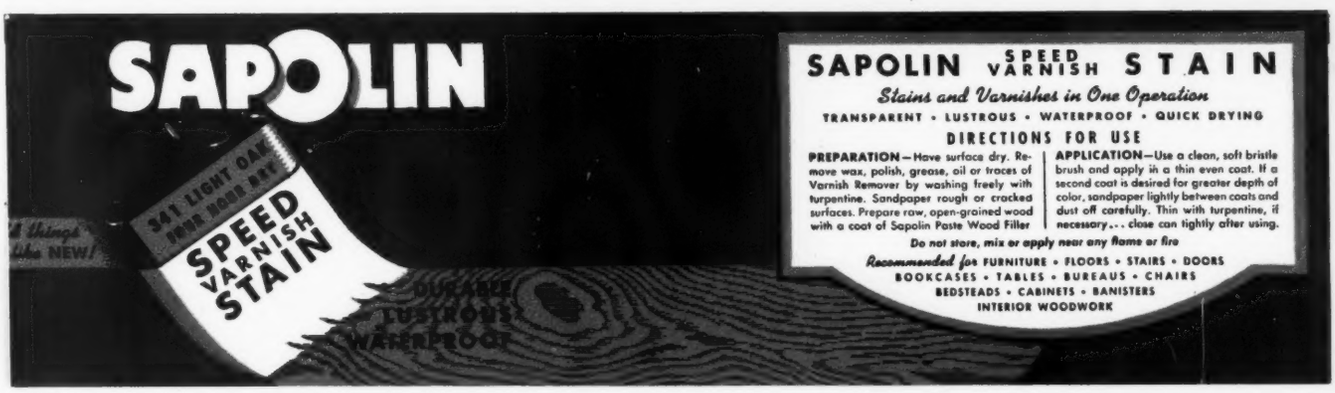
Among the advantages of the label is its adaptability to all sizes and variations as well as its adaptation to display material. Wherever the trademarked design appears it says "Sapolin" in a simple, direct manner. The design will be used for point-of-sale and exterior display as well as for advertising material. Same design will appear on shipping containers.

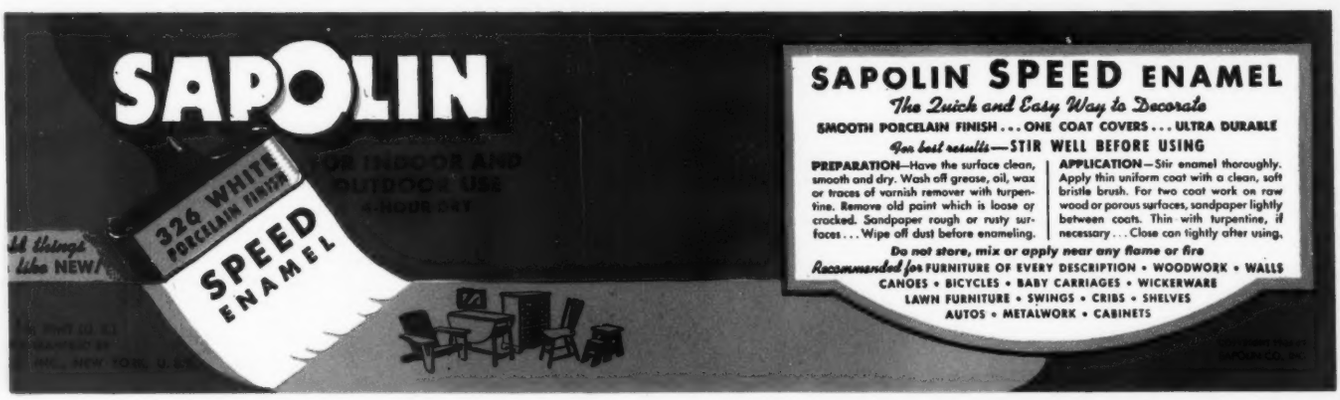
An educational program through sales force and by direct mail has familiarized dealers with the program and very enthusiastic response has been received from merchants commenting on the display value and easy identity of the new packages.

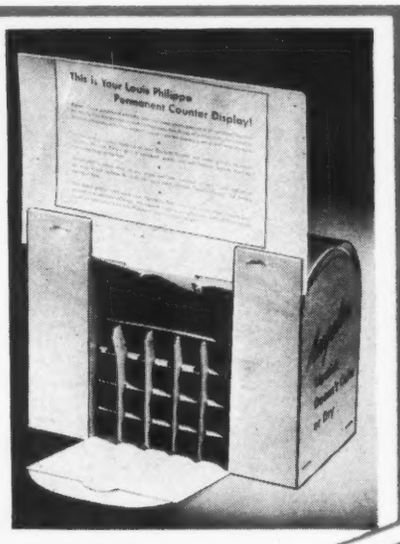
CREDIT: *Labels designed by Jim Nash, New York; printed by Detroy Press, Inc., New York.*

2—Each product group has its identifying basic color. Tip-on labels show three of the five groups. Product uses are pictured on brush stroke. Easy-to-follow directions are in big black and white panel.


SAPOLIN
124
LIQUID PLATING
HOT PIPE
ALUMINUM
SAPOLIN HOT PIPE ALUMINUM
The High-Heat Aluminum Plating
BEAUTIFIES... PREVENTS RUST... DEFIES HEAT... DRIES IN 1/2 HOUR
READY TO MIX—Follow Instructions
PREPARATION—Have the surface clean, smooth and dry. Wash off grease or dirt with turpentine. Remove rust with sandpaper, steel wool or wire brush. It is best to let heated surfaces cool before painting.
APPLICATION—Pry off lids from both compartments and stir Sapolin Aluminum thoroughly into liquid portion. Replace can lid and shake to insure uniformity. Apply with clean, soft brush, using long even strokes.
Do not store, mix or apply near any flame or fire
Recommended for FURNACES • BOILERS • BURNERS • PIPES
MOTORS • STOVES • OVEN INTERIORS • RADIATORS
VALVES • FIXTURES • MANIFOLDS • HOODS
ENGINE ROOM EQUIPMENT


SAPOLIN
SPEED VARNISH
STAIN
DURABLE
LUSTROUS
WATERPROOF
SAPOLIN SPEED VARNISH STAIN
Stains and Varnishes in One Operation
TRANSPARENT • LUSTROUS • WATERPROOF • QUICK DRYING
DIRECTIONS FOR USE
PREPARATION—Have surface dry. Remove wax, polish, grease, oil or traces of Varnish Remover by washing freely with turpentine. Sandpaper rough or cracked surfaces. Prepare raw, open-grained wood with a coat of Sapolin Paste Wood Filler
APPLICATION—Use a clean, soft bristle brush and apply in a thin even coat. If a second coat is desired for greater depth of color, sandpaper lightly between coats and dust off carefully. Thin with turpentine, if necessary... close can tightly after using.
Do not store, mix or apply near any flame or fire
Recommended for FURNITURE • FLOORS • STAIRS • DOORS
BOOKCASES • TABLES • BUREAUS • CHAIRS
BEDSTEADS • CABINETS • BANISTERS
INTERIOR WOODWORK


SAPOLIN
326 WHITE
PORCELAIN FINISH
SPEED
ENAMEL
SAPOLIN SPEED ENAMEL
The Quick and Easy Way to Decorate
SMOOTH PORCELAIN FINISH... ONE COAT COVERS... ULTRA DURABLE
For best results—STIR WELL BEFORE USING
PREPARATION—Have the surface clean, smooth and dry. Wash off grease, oil, wax or traces of varnish remover with turpentine. Remove old paint which is loose or cracked. Sandpaper rough or rusty surfaces... Wipe off dust before enameling.
APPLICATION—Stir enamel thoroughly. Apply thin uniform coat with a clean, soft bristle brush. For two coat work on raw wood or porous surfaces, sandpaper lightly between coats. Thin with turpentine, if necessary... Close can tightly after using.
Do not store, mix or apply near any flame or fire
Recommended for FURNITURE OF EVERY DESCRIPTION • WOODWORK • WALLS
CANOES • BICYCLES • BABY CARRIAGES • WICKERWARE
LAWN FURNITURE • SWINGS • CRIBS • SHELVES
AUTOS • METALWORK • CABINETS



DISPLAY

1 A counter basket designed for Ar-Ex chap cream, manufactured by Ar-Ex Cosmetics, Inc., Chicago, does a fine self-selling display job while taking up little space on the retailer's counter. The copy around the base of the display emphasizes the fact that this cream contains healing ingredients and that a physician's advice should be asked about cosmetic use in general. Display, Consolidated Lithographing Corp., Brooklyn, N. Y.

2 Admiral Corp. has designed a display constructed of wood, finished in ivory and black, which dramatizes its Lifetime Precious Jewel phonograph needle. A beveled glass front makes the illuminated case pilferproof. The back, which is removable and can be locked, has a storage space for four tiers of the transparent methyl methacrylate packages. The packaged needle is shown against a background of a photograph of one of the company's national advertisements, giving something of a stage effect. Display, The Woodcraft Corp, Bay City, Mich.

3 A new display for Louis Philippe's "Angelus" lipstick is made of heavy paperboard finished in a wood-grain effect. An acetate front permits full view of four lipstick cases which fit snugly into die-cut wells. Each lipstick has underneath it a swatch of the color of the stick. Since a new shade, "Sparkling Red," was introduced simultaneously with the display's release, a sticker effect at the base of the display calls attention to this new color. Possibly one of the most interesting features of the new display is the storage space provided for additional stock in the back. Twenty small slots hold twenty extra cases, slid in head first so that the clerk can see the color identification tag on the bottom at a glance. In this way, Louis Philippe makes sure that a full range of shades is always handy when a customer is stopped by this latest counter-dispenser. Display, Industrial Lithographic Co., New York City.

4 An inexpensive, yet luxurious-looking, permanent counter display for Cheramy products combines plastic with wood.

The gracefully curved transparent plastic backpiece which fits into a groove along the back of the wooden base adds a note of elegance to this simple counter piece. Color is achieved by means of the two cloud-like effects behind each of the bottles. Display created and produced by Nathaniel H. Freeman, New York, N. Y.

5 A reproduction of a painting by a well-known Chicago artist is the center of attraction in this new four-color display card for "Tintz" color shampoo soap. The simplicity of the art work and copy help to dramatize the product use. The display is being offered to retail outlets to tie in with the recent national advertising campaign in leading newspapers and women's magazines. The easel mounted card is made in two sizes—large, 22 in. by 14 in., and small, 11 in. by 7 in.—for use in windows and on counters. Display, Stemar Co., Chicago.

6 Now that Florida and Bermuda vacations are again in order, Park and Tilford Distillers, Inc., is right in tune with the times with this new display for Brugal Rum. The outdoor cafe setting with a background of palm trees is done in four coloré. The enlarged bottle in the foreground is in natural color with the label receiving special emphasis. The cards are easel mounted and suggested for window or back-bar use. Silk screening of display, Bryan-Elliot Co., New York, N. Y.

7 A three-color paperboard and glass display is one of the promotional pieces being used by Taylor Instrument Co. in its 1945–46 National Fever Thermometer campaign. The simple silver and black illustrations at the top demonstrate the part a fever thermometer plays in maintaining family health. The supporting panels are predominantly blue, of a shade which doesn't show dust too easily. To help the retail salesman make the sale, the display panel, on which are mounted five samples, may be easily removed and handed to the prospective buyer for close inspection. On the cover of the dustproof stock compartment is printed useful selling sentences along with a stock record form which enables the proprietor to keep a simple, visual inventory record. Display, Schaefer-Ross Co., Webster, N. Y.

GALLERY

6

New Color Cake
Shampoo
Tints Hair as it Luxuriously
Gleaming Hair Without an After Rinse!
Leaves Your Hair Its Softest.....
Most Lustrous. Easiest to Manage
Tintz Color Shampoo.....50¢

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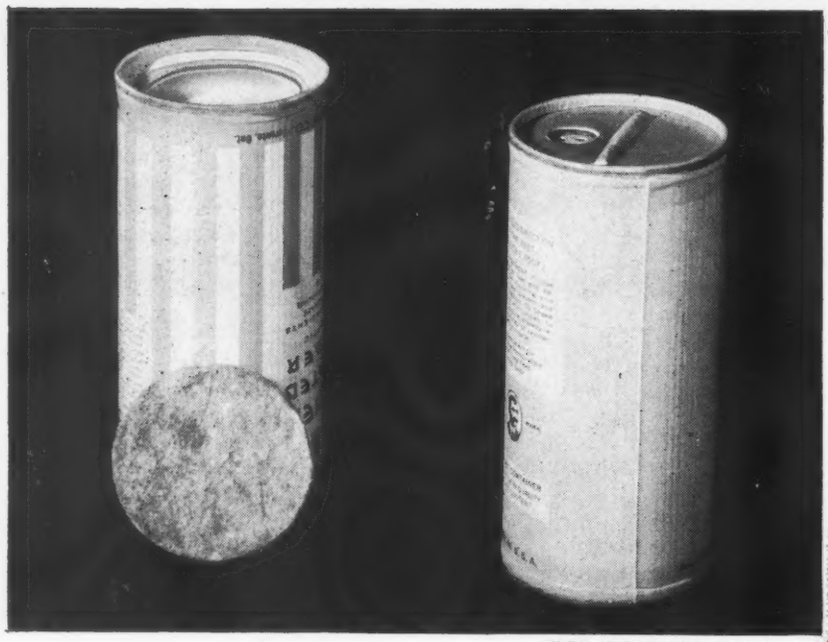
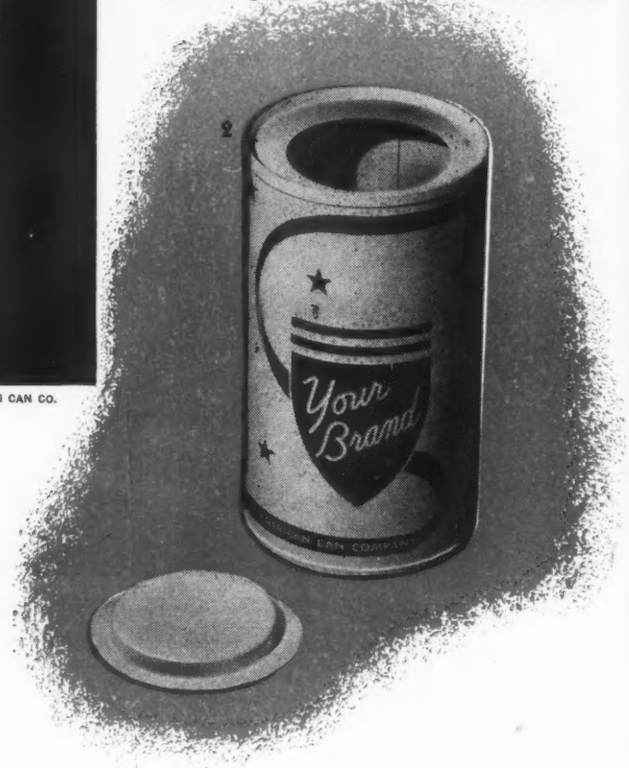


PHOTOS, COURTESY AMERICAN CAN CO.

1—*All-fibre lap-seam can with sift-proof revolving top for powdered products formed and lithographed on modified metal-can machinery. Felt-lined bottom closure, left.* 2—*All-fibre lap-seam can for dry products has expandable fibre closure; can be made on high-speed tin-can machinery.*



The fibre can

and its peacetime prospects

*by D. G. Magill**

With metal gradually coming into more plentiful supply, this is an opportune time to assay the war-developed qualities of the fibre can and determine, as best we can, what part of its wartime gain it may be expected to hold in peacetime competition.

Requisite to such a study is a consideration of some of the technological improvements that have made the fibre can a far better container for many products than it was prior to 1942.

Months before Pearl Harbor engineers and designers of the can companies were devoting a major share of their time and attention to development of fibre cans and containers which would serve as substitutes for their metal counterparts in the event that hostilities drained the supply of tin and steel for civilian use.

It is one of the industry's proudest achievements that it was able to shift a large percentage of its production from metal cans to fibre and combination fibre-metal containers. It is difficult to imagine the confusion and the impact upon the civilian economy, as well as the military supply situation, had a way not been found to package a large number of items, formerly packed in metal, for which no metal could be made available under the conservation program.

Many items, such as foods, chemicals, drugs, paint, putty and roofing compounds have moved into both civilian and military consumption in hundreds of millions of fibre containers. Formerly, these items called for packages manufactured of critical materials, and they might well have become wartime casualties for the duration, as far as civilian consumption was concerned, had not new types of paperboard, new techniques of manufacture, new coatings and new adhesives been made available for the emergency.

Additions that could be made to existing fibre container equipment were limited because of the material supply situation. A way had to be found to manufacture fibre cans on existing metal can machinery. Information developed by the can manufacturers as to suitable coatings and adhesives which would make this type of production possible was not only passed on to the industry but to other countries who were our allies in the war.

Although machinery procurement was limited, this company alone during the first year of the war spent $600,000 on equipment with which to make substitute containers. This program was adopted with a view to protection of civilian supply of packaged goods regardless of what value the equipment might have at the end of the emergency. Performance of fibre containers under the hazards of wartime shipment and in packaging a variety of items heretofore packaged only in metal now indicates that there is an assured future for many fibre containers developed as wartime substitutes.

One of the most interesting developments to come out of substitute package design was the so-called lap-seam fibre can. Whereas the spiral and convolute cans were made up of multiple plies of various kinds of paperboard, the lap-seam can had but a single ply and thus could be manufactured with slight modifications on tin can machinery. The single ply permitted higher-speed manufacture than was the case with the convolute type, and it also lent itself to inner coatings or treatments as well as decoration of the outer surface.

* Manager, Fibre Can Division, American Can Co.

One of the most interesting of these lap-seam containers is the basic type originated for talcum and deodorant powders. It was so designed that it could be made on machines ordinarily used for the manufacture of all-metal talcum powder cans. This item is all fibre, with a top that will turn and sift in the same manner as that of its metal prototype.

A similar can designed to hold spice and the like has also been manufactured in large quantities on former tin-can machinery. This can, however, has the regular tin-can metal sifter top and a metal bottom, but large quantities of tinplate were saved by the lithographed paper bodies. It is interesting to note that the paper in these bodies was treated with a coating on the interior that held volatile oils of such spices as cloves and cinnamon in a satisfactory manner.

This was the result of a program of research and development outlined and planned some years ago, which brought into being a large number of plastic-base coatings designed to be impervious to the extremely volatile and delicate spice oils. While for the most part planned as surface treatments for sheet metal, these coatings, with some modifications, were found to be applicable to paperboard. In fact, they could be applied with regular sheet-metal coaters and dried in ovens originally used for drying coated tinplate and sheet steel. Because the body of this can may be lithographed as a part of the manufacturing procedure, no separate label is necessary as is the case with both the convolute and spiral types of containers.

A moistureproof fibre can, the development of which started just before the war period, has unusually interesting possibilities and embodies a new technique in the production of moistureproof paper developed by our engineers. Heretofore, practically all moistureproof fibre cans were treated with asphalt, which although satisfactory in many ways has the drawback of being black in color and, unless applied in very heavy films, has only moderate moisture resistance. The new moistureproofing method embodies the development of colorless, odorless but very moistureproof adhesive films which are placed between glassine and other similar types of hydrated cellulose sheets and ordinary paperboard. When this treated board is made into fibre cans, the resulting containers are far more moistureproof than anything of this type heretofore developed.

This advance in technique and improvement in material has made it possible to market successfully such products as baking powder, dry chemicals and other hygroscopic products that formerly had to be packed in all-metal containers. This type of fibre can was manufactured during the entire war period in very considerable quantities and was instrumental in saving large amounts of sheet metal for the war effort. It has been so successful that some large packers of baking powder and like materials have chosen it as their postwar package.

Because of the special function of the moisture program, every step from the selection of the paper pulp through to the

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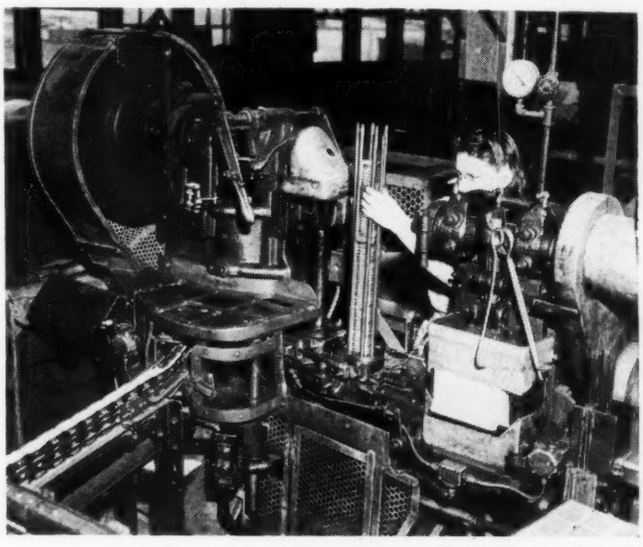

3—Machine automatically applies ends to bodies of fibre toothpowder cans. 4—Wartime protective refinements of composite metal-fibre can for spices, baking powder, etc., may warrent its continued use in this field. Can at left is convolutely wound from special moistureproofed paperboard and automatically labeled while body is being formed; top is metal friction plug. Other two cans are of lap-seam construction, specially treated for flavor-retention, and lithographed. 5—Automatic seaming of metal ends to composite fibre-metal spice containers.

finished can is carefully checked by control laboratories. The machine on which the paper is rendered moistureproof has every possible mechanical control of vital factors such as temperature, pressure and film weights, as well as a moisture-vapor-transfer test, used throughout the industry, which is followed in checking all such paperboard combinations.

The moisture-vapor-transfer rate for board to be used in the manufacture of cans for baking powder and other products requiring similar protection has been set at not to exceed .150 gram per 100 sq. in. per 24 hrs.

Performance of the composite paint can, in its role of packaging an essential product which, previously, had always required a metal can, made its contribution to the prestige of the fibre container both valuable and significant.

In developing this, can company engineers took the metal container equipment, redesigned the dies to produce a wider flange, made use of the regulation steel ends and thus evolved a substitute package which could be manufactured on regulation tin-can-making machinery. The body of the can is fibre, with an oilproof lining. This lining actually consists of two parts: first a strong ply of a well-hydrated greaseproof paper, the overlaps of which are held down with oilproof cement, and a second coating sprayed over the greaseproof paper giving double resistance to the penetrating ingredients used in the manufacture of oil-base paints. This structure, although used primarily for paint during the war period, should have definite possibilities for the future for commodities containing oily products.

In order to provide a body wall strong enough to hold lead-base paints, which sometimes weigh as much as 18 lbs. per gallon, a special paperboard was devised. Although very tough and rigid, this board did not use a quality of pulp of a critical nature, the sheet being made from a paper mill by-product known as screenings which is not usable for fine paper because of particles of wood but which has a high Mullen and Elmendorf test. A similar can with a waterproof interior lining was designed for water-base paints.

Shortly after the start of the war, many standard fibre cans were in such demand as to overtax the then-existing equipment. To meet this situation, Canco inaugurated an equipment building and purchasing program and was able to get into operation a considerable amount of vital fibre can machinery well in advance of allocation. Soon our output in fibre can factories was doubled and then trebled on certain types of cans and we were able to keep many manufacturers of necessary products well supplied with containers.

Fibre cans were made in unprecedented quantities for such commodities as biscuits, bandages, bread crumbs, cereals, hand soap, cocoa, chemicals and drugs, dehydrated vegetables, dental powder, dessert powder, fertilizers and soil inoculators, insecticides, moth crystals, salt and smoked salt, seasonings, scouring powder, spices, tea and wallpaper cleaner. This production required two shifts regularly and much overtime.

At the start of hostilities, when it became obvious that there would be a tremendous increase in the demand for non-metal containers, a committee of chemists and engineers was formed and specifications were written for containers for every commodity which experiments or practical experience had indicated we would be able to carry safely in fibre cans. This

6—Spiral-wound metal-ends can for oil-base paint is made of specially strong paperboard, with an oilproof lining. It is made on regular tin-can machinery. **7**—*After the metal ends are automatically seamed to fibre bodies, the operator takes the completed cans from the runway and places them in large dustproof bags.*

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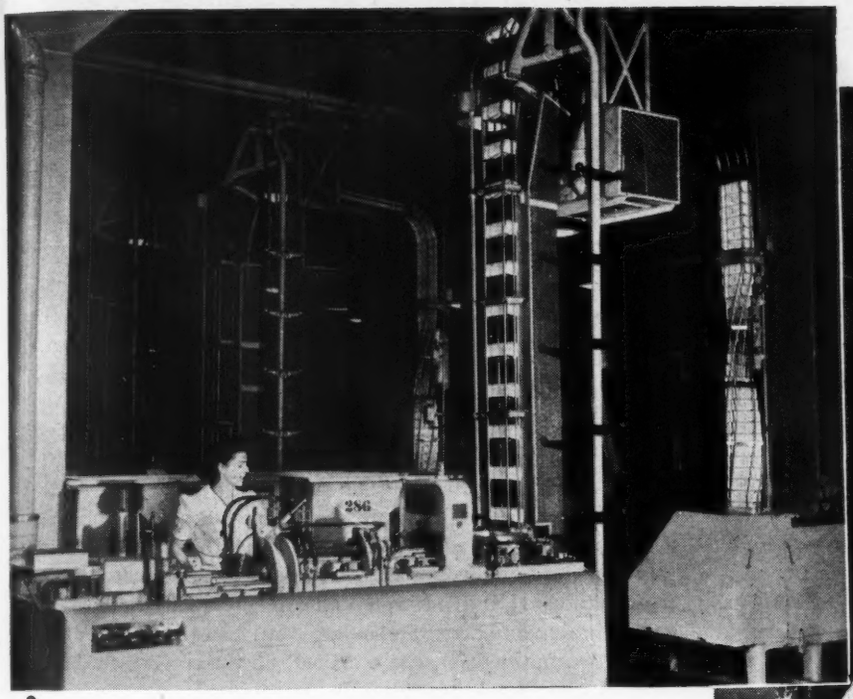

8

9

list was placed in the hands of the sales department and was of great assistance in determining promptly the type of package best suited for a given commodity. It saved a great deal of time which otherwise might have been consumed in experimental packs and tests. While the development of fibre containers for paints and similar commodities was more spectacular, meeting the greatly increased demand for regular fibre containers for customary as well as new commodities was of the utmost importance.

No evaluation of the fibre package would be complete without consideration of the fibre milk container, demand for which has consistently grown since its introduction 11 years ago.

The manufacture of the fibre milk container has many interesting aspects which make (*Continued on page 166*)

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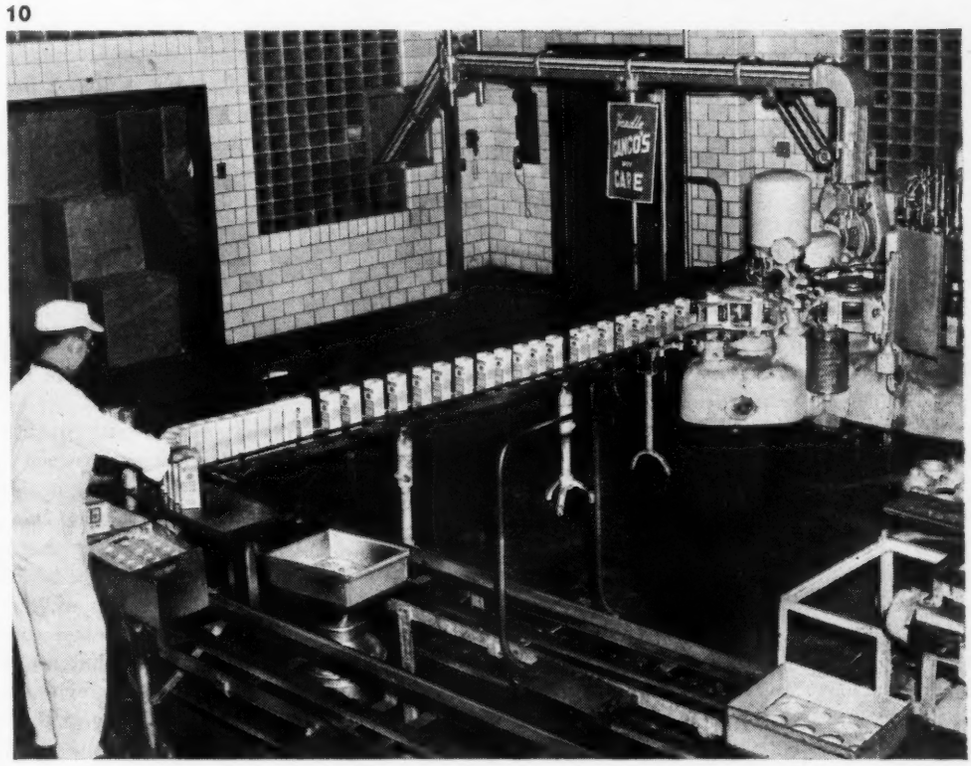

8—*Bodies of fibre milk containers being shaped on automatic machinery. Production amounted to more than one billion in '44.* **9**—*Milk containers travel on automatic line through glass-enclosed chamber where they are sterilized, paraffin-coated and cooled.* **10**—*In this dairy filled and sealed containers are moving out from filling machine for packing in delivery cases.*

Export conference

. . . packaging experts report to the Merchant Marine

Recognition of the importance of adequate packaging for postwar commercial export trade is evidenced by the establishment of a packaging panel by the American Merchant Marine Conference for the first time in its history. The necessity for cooperation between shippers of products and manufacturers of packaging materials in developing adequate packaging protection for postwar commercial export shipments in the light of experience gained during the war years was stressed by Frederick S. Leinbach, assistant general manager of the Riegel Paper Corp., who served as chairman of the panel on "Package and Packaging for Commercial Export Shipments vs. Overseas Military Shipments" at a joint meeting of the American Merchant Marine Conference and The Propeller Club of the United States in New York on October 17, 1945.

Meeting under the auspices of the Packaging Institute, Inc., at the Waldorf-Astoria, packaging experts and industrialists were given a clear picture of packaging accomplishments during the war and of the value that wartime experiences can be in postwar trade.

Speakers at the conference were Herbert T. Holbrook, manager of packaging materials dept., Bulkley Dunton Pulp Co., Inc., co-chairman of the panel; Henry A. Wolsdorf, director of sales research, Package Research Laboratory; J. D. Malcolmson, technical director, Robert Gair Co., Inc.; Charles A. Southwick, Jr., technical editor of MODERN PACKAGING and package research director of Shellmar Products Co.; and G. E. McCorison, vice-president of the Thilmany Pulp & Paper Co.

Herbert T. Holbrook

Reviewing packaging problems in the early stages of the war, Mr. Holbrook noted that very little was known about export packaging prior to 1941 and that there were no rules or standards which could be followed. The Services recognized the problem with which they were confronted and set about establishing standards and specifications. By the process of trial and error, definite standards for testing packages and determining the degree of punishment a package will take were established.

These definite testing standards were then incorporated in the JAN (Joint Army and Navy) specifications, which are available to anyone from the U. S. Government Printing Office. The JAN specifications are now available for use in setting standards for commercial export packaging. Mr. Holbrook pointed out, however, that export shippers must set the pace for the packaging industry—they must make their requirements known and the packaging industry will supply their requirements.

Adequate packaging during the war was at times rather expensive because of lack of materials and the necessity to use substitute materials that were available. The packaging industry is entirely satisfied, Mr. Holbrook stated, that in the postwar era it can satisfy shippers' requirements of cost within the price limitations set for any specific article. "There is no reason why we cannot give the necessary degree of packaging protection within whatever cost limitation industry might establish," Mr. Holbrook added.

Charles A. Southwick, Jr.

Illness prevented the appearance of Mr. Southwick, whose paper on "Corrosion Preventive Packaging" was read by Mr. R. L. Lee of the Shellmar Products Co. In discussing the two basic types of packaging for corrosion prevention, Mr. Southwick explained that in Methods I and I-A the corrosion preventive is applied directly to the unit to be protected, while in Methods II and III protection is achieved by the use of a moisture-vapor barrier and a desiccant. In the first instance the preservative has to be removed; in the second, the product is immediately ready for use.

The advantages of Methods II and III were pointed out by Mr. Southwick. They have universal use while Method I cannot be used for intricate parts that cannot readily be reassembled; special compounds must be provided for Method I packs while the same fundamental procedure may be used to maintain quality for all products packaged by the Method II requirements; samples must be examined for inspection of Method I packs, while visibility and the humidity indicator make inspection simple for Method II packs (windows are provided for opaque barriers). Re-use of materials is impossible with the Method I pack, while with Method II the barrier, if the seal is carefully cut, may be re-used and the desiccant, after reactivation, may be used again. Products packaged by Method I have a greasy and unattractive appearance, while those packaged by Method II have an excellent display value for merchandising. A great deal of labor, special equipment and know-how on the part of the dealer are required to prepare Method I packages for use, while only a pair of scissors or a knife is required to free Method II packs. Costs of Method II packaging are somewhat higher, but after considering costs of labor, material, time, etc., incident to the Method I pack, costs of Method II might actually be less than the costs of a Method I pack.

Mr. Southwick also pointed out the differences between packaging for commercial use and packaging for war use. Production for the military was complex and expensive because of lack of uniform practices, the need for multiple packaging, the lack of trained personnel. In peacetime, the standardization of procedures and materials, decrease in range of sizes, uniformity of production schedules will simplify production. Storage periods were unknown during the war, while in commercial trade shelf life and points of destination will be known and inventory control, handling and inspection will be normal.

Mr. Southwick expressed the belief that Method II will be used for packaging a large portion of postwar export commercial shipments as well as for domestic shipments to high humidity areas within the United States.

Pointing out that use of the Method II pack will not be limited to packaging of metal parts, Mr. Leinbach called on Dr. C. E. Waring of the Davison Chemical Corp. to reveal applications of the Method II (*Continued on page 158*)

Soda straws *guard the Navy's time*

Many ingenious packaging stories that could not be told before are coming to light now that the war is over. Some of these offer excellent examples to companies which may have similar packaging problems for civilian products.

One of these is the way the Hamilton Watch Co., Lancaster, Pa., packages a delicate chain used for a marine chronometer in an ordinary cellophane soda straw.

Early in the war when this company started to manufacture chronometers for the Navy, it was faced with literally thousands of problems, first because marine chronometers had never before been made in this country and, second, never before in the quantities demanded.

The Hamilton Chronometer is now standard on all United States ships of the fleet and the company gives a lot of the credit for their fine performance to packaging.

Unlike an ordinary timepiece, the marine chronometer (which is the most accurate of all portable timekeepers) has built into it automatic compensation for practically every error that could occur. To correct the change of rate which would normally occur as a mainspring gradually unwinds, the chronometer uses a simple device known as the "fuzee." This is actually a conical-shaped track and the mainspring is transmitted to the time-keeping "train" through a small chain known as the "fuzee chain," which is wound around the track. As the mainspring power lessens, the pull of the chain is on a wider part of the cone, thereby increasing the leverage and offsetting the power loss.

The fuzee chain, which is 28 in. long and has more than 700 individual pieces, must be extremely strong to stand the full power of the mainspring, yet very flexible in order to do its work without loss from friction. It is one of the most accurate and most difficult parts of a chronometer, and extreme care must be taken after it is manufactured to keep it in its original condition until it is inserted or used as a replacement.

The problem of its protection by packaging was solved by Hamilton's chief physicist, William O. Bennett, who helped set up the original chronometer manufacturing operations. He procured extra long (32-in.) cellophane soda straws. Especially designed apparatus was built for inserting the chain into this soda straw container. A T-shaped rack was clamped to the edge of a table. On the cross arm of the T about a dozen of the chains may be hung vertically. By hand a "straw" is then fitted over the bottom end of the chain and slipped up until all of the chain is in the "straw" (Fig. 2).

Another ingenious part of the package is the method of closure devised by Egbert Van Haaften, another Hamilton engineer. He closed the ends by inserting a one-inch piece of copper wire in each end of the tube and then with tweezers rolled the ends. The copper wire keeps the roll securely in place.

For factory use, the tube package is maintained in its original length, but for outside shipment, it is carefully folded and packaged about 12 to a corrugated container.

CREDIT: *Cellophane tubes, Lancaster Paper Tube Mfg. Co., Lancaster, Pa.*

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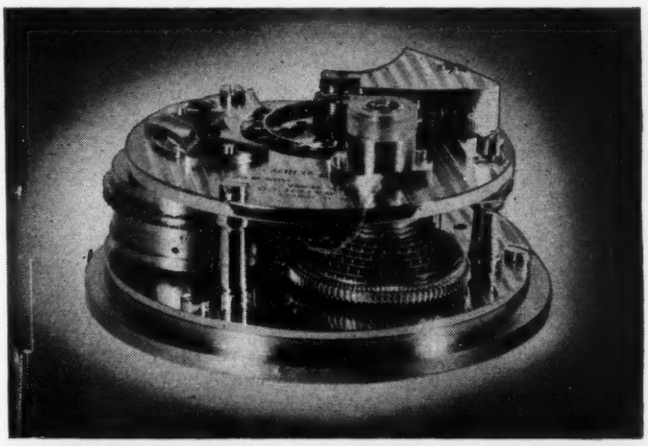

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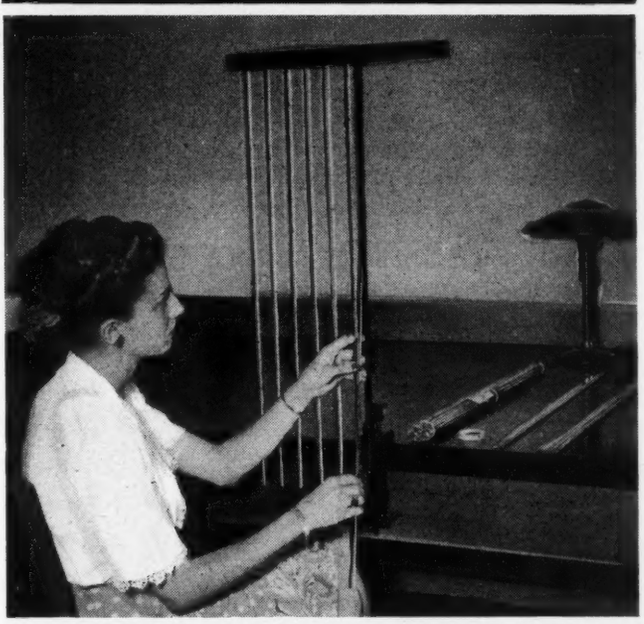

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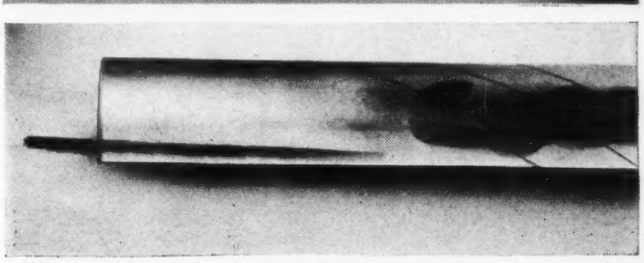

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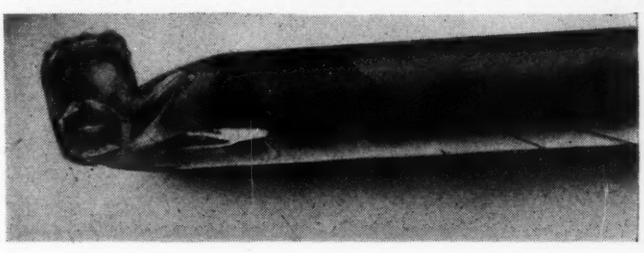


1—Chronometer showing "fuzee" chain. 2—Girl slides "straws" over chains on rack. 3—Chain and straw. 4—Copper wire placed in tube end. 5—Ends are then rolled up.

Weatherproof fibreboard drum

A by-product of the war-time development of weatherproof V- and W-board is a new waterproof fibreboard shipping drum, on which tests were just being completed by the Office of the Quartermaster General when war ended in the Pacific. The new drum is said to be relatively as great an improvement, from the standpoint of weatherproofness, as V-board was over the pre-war fibreboard box.

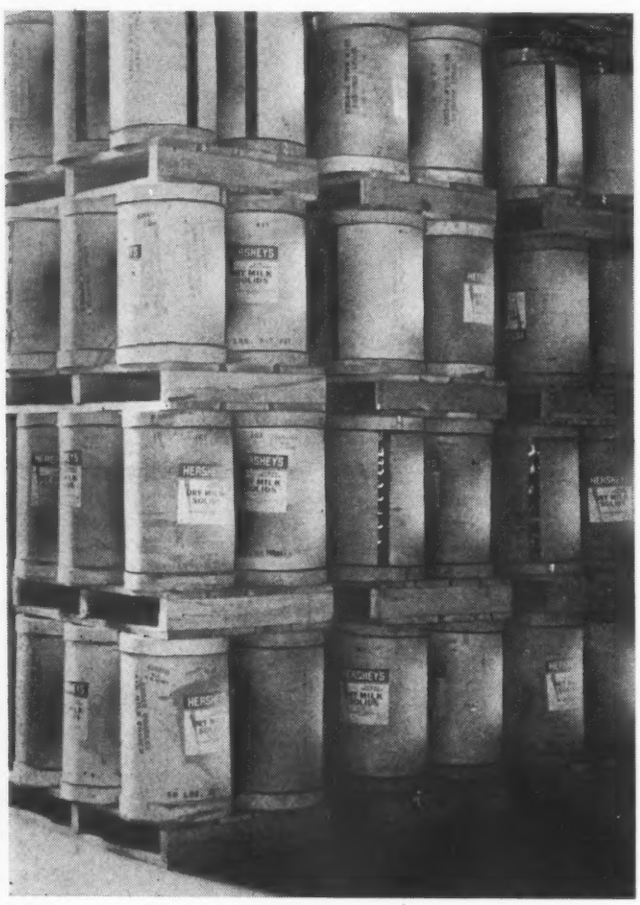
Despite the war's end, the OQMG is proceeding to rewrite its specifications for fibreboard drums to encompass the new construction, which has been proved by stringent tests. These specifications, which will be issued as a joint Army-Navy Specification, are expected to result in the adoption of this type of drum for many products shipped in civilian trade.

Until the development of V-board, fibreboard drums could not meet the 24-hr. immersion test prescribed for overseas shipment. The new drums will do it.

The new specifications will cover three types of drums: Type I, Grade A; Type I, Grade B; and Type III.

Type I, Grade A is used for powdered, granular and flaked materials and must be waterproof without the use of a bag liner. Type I, Grade B is used for the same materials as Grade A, but a bag liner is required to make it waterproof.

Water-resistant principles of V-board have now been applied to fibreboard shipping drums, with the result that Type I, Grade A drums are waterproof in a 24-hour immersion test without use of a bag liner. Specifications drawn by Quartermaster Corps will be used by industry.



Type III is for hot-poured materials that solidify upon cooling. These drums must be limited to materials poured at temperatures not exceeding 550 deg. F., and with a minimum melting point of 120 deg. F.

The new specifications will require that all component plies of kraft in sidewalls and headings be heavily sized, dense, water-resistant fibreboard, and that they be combined with water-resistant adhesive that will withstand maximum permissible ply separation of $^1/_4$ in.

Side walls of the drums shall be continuous, without joint (convolute wound) or lap joint, joined by overlapping the ends. No ply shall be less than 0.012 in. thick. Not less than one ply shall be duplex kraft laminated with asphalt. Side walls must meet a puncture test, either Mullen or Beach, ranging from 585 lbs. wet and 650 lbs. dry, up to 810 lbs. wet and 900 lbs. dry, according to the thickness of the walls. Tops and bottoms may be of wood, fibreboard or metal.

Type I, Grade A and B drums shall withstand the following dry drop test; drums shall be filled with dry, finely powdered material to the maximum authorized weight. The drum will then be dropped from a height of four feet on a solid concrete floor or steel plate so as to strike diagonally on the top of the closure or chine. The same drop will be made on the bottom chine. Drums with wood heads shall be dropped with the grain of the heading parallel to the floor.

Type I, Grade A and B drums must withstand a wet test by being filled as above, then immersed for 24 hrs. in water at temperatures ranging from 60 to 80 deg. F., to a depth of 1 in. over the top. Upon removal from the water, the drums will be subjected to the same drop tests described above except that the height will be two feet instead of four.

Type I, Grade A and B drums, filled with powdered material, will be subjected to a uniformly distributed top compression load of 1,000 lbs. while dry for drums exceeding five gallons capacity. Those with capacities of five gallons or less must withstand a load of 500 lbs. for the same period.

These drums, after the dry drop test and 24-hr. immersion, are to be submitted to wet compression test, according to size:

Capacity of drum, gals.	*Top load, lbs.*
5 or less	250
6 to 10	450
11 to 25	600
Over 25	750

Compression tests for Type III drums are made with the drum filled with asphalt, wax or other material the melting point of which does not exceed 550 deg. F. The material in the drum is to be preheated to a temperature of not less than 125 deg. F. A weight of 900 lbs. is to be placed on top of the drum and remain in place for 24 hrs. with temperature of the surrounding air in the test room not less than 125 deg. F. Tests for drums containing materials with a minimum melting point of 160 deg. F. are made at a room temperature of not less than 125 deg. F., with the material preheated to 125 deg. F. and a weight of 350 lbs. placed on top of the 115-lb. capacity drum, and 900 lbs. on the 55-gal. drum. The weights are to remain in place for 24 hrs. as in the other tests.

All of the values described in the new specifications were determined by actual tests and are placed a little below the test failing points.

4 STRINGS IN OUR BOW

The Burt bow has four (count 'em) strings!

The first is economy—and we don't mean only low cost. Burt packages cost less, they are also of uniformly fine quality. Automatic production is the reason.

The second is speed—Burt's specially built machines produce small set-up boxes (round, oval, square, oblong) as fast as the largest packagers of mass-merchandise can use them.

The third is uniformity—rigid control of the manufacturing process makes the first Burt package and the millionth in the same run look alike.

The fourth is delivery—glad are we to be able to dust off this important point, so long in abeyance because of wartime transportation difficulties. Soon, again, it will be a reality: "OVERNIGHT DELIVERIES TO KEY POINTS IN THE EAST AND MIDDLEWEST."

Burt is centrally located to all forms of transportation: rail, air, water, highway.

F. N. BURT COMPANY, INC.

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"Better consult Package about this"

WHEN new packaging developments are under consideration, it pays to get authoritative information on modern machine methods of production.

We are constantly evolving improved methods of wrapping, and machines that offer drastic savings through higher speeds and greater all around efficiency. We are also producing machines for products that have never been packaged before. Today such products as sheets, towels, underwear, hosiery, fruits and vegetables are in line for greater sales at lower cost, thanks to developments undertaken by the Package Machinery Company's engineering staff.

Our engineers are not only expert in devising cost-saving mechanical improvements, but are equally ingenious in developing refinements that have an important bearing on sales. You can see such sales-winning packages in retail outlets everywhere—candies, cakes, tomatoes and other foods in enticing transparent wraps...chewing gum, cigarettes, razor blades—in attractive wrapping that features an easy-opening tape, leading makes of candy bars, frozen foods, cough drops, toilet soaps, etc.

PUT OUR INGENUITY TO WORK

We invite you to consult us—when you plan to improve your present package or are in need of the right package for a new product.

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Springfield 7, Massachusetts

30 Church St., New York 7 • 111 W. Washington St., Chicago 2
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PACKAGES THAT SELL . . . WRAPPED ON MACHINES THAT SAVE

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

For better usage . . . 1. Films, foils and sheeting

by Charles A. Southwick, Jr.

This is the first of a series of brief reports and recommendations on commonly used words and terms of arbitrary or ambiguous meaning. Packaging, in its rapid growth, has drawn upon older groups and industries for much of its terminology, definitions and mensuration. Unfortunately, many of these borrowed terms did not lend themselves to broader usage or were not capable of being revised to meet new needs. It is the intent of this and following reports to show the confusion now existing in different phases of packaging because of the lack of an accepted and definitive terminology.

Unfortunately, these reports and their recommendations can only indicate the need of revision and standardization. It will remain for some industry group to make such changes official and effective.

The first of these reports covers the terms "films," "foils" and "sheeting." These terms are used by the plastic, coating, metal and regenerative cellulose companies engaged in packaging activities. These divisions include companies engaged in the production of all forms of vinyls, cellophane, rubber derivatives, synthetic resin, thin metal products, lacquers and other coating types. These represent many companies, many products and many points of view as their definitions of films, foils and sheeting will show. Many companies' entire business is covered by these terms and to others the terms describe a large part of their production.

As a result of letters sent to various companies in these fields, the following definitions were received. It will be noticed that in two cases, two different divisions of companies disagreed on the meanings of these terms. The following are the replies received and cover every letter submitted:

A manufacturer of vinyl resins defines these terms as follows: "Foils are vinyls in thickness up to 0.005 in.; films are between 0.005 in. to 0.012 in.; vinyls of greater thickness we call sheetings."

Strangely enough, another office of this same company says: "Films measure up to 0.003 in.; foils from 0.004 in. to 0.010 in. and sheetings 0.010 and greater."

A different vinyl producer offers a more complex definition: "Films—material less than 5 mils in thickness and/or having drape-like or very flexible characteristics. Foils—thin metallic materials. Sheetings—materials having thickness greater than 5 mils and/or rigid or semi-rigid characteristics."

Two divisions of another plastic producer differ slightly in their usage. One says: "Foil—up to 0.002 in. in rolls; films—0.003 to 0.010 in rolls; sheeting—0.005 in. and thicker in sheets." The other: "Foils—below 0.002 in rolls; films—above 0.003 in rolls; sheeting—0.005 in. or thicker in sheets."

A company making rubber derivatives defines: "Films—non-metallic packaging materials (other than paper) produced in gauges up to 0.00275 in.; sheeting—non-metallic packaging materials (other than paper) in gauges above 0.00275; foils—non-ferrous metallic packaging materials produced in gauges up to 0.005 in."

A large producer of cellulose membranes says: "Films—terminology should be limited to a continuous homogeneous flexible transparent sheet used for wrapping purposes. If laminated to itself, and if it retains sufficient flexibility for wrapping purposes, it can still be referred to as a film or film lamination. If laminated to foil or other opaque material, as cloth or paper, it can be referred to as a laminated wrapper or sheeting. Foils—It is believed that the use of the word 'foil' should be confined to designate thin-gauge metal of a thickness sufficiently thin to permit its use as a wrapping material. Sheetings—It is not believed that any definition can be set up for sheetings due to the wide use of this term. For example, in the metal trade, thicknesses of metal below $^1/_4$ in. are referred to as sheetings, and one also finds that this terminology is used in connection with cloth, laminated materials, transparent films, foils, etc. On this basis, we do not believe that any satisfactory limitation can be placed on the use of the word 'sheeting.' "

From a Government bureau came this definition: "Film—a transparent or translucent thin material of such flexibility that it may be folded or wrapped around an object and conform readily to the approximate shape of the object. It is conformed, in contrast with coatings that are sprayed, dipped or brushed directly on the object. Foil—Opaque or only slightly translucent, but very thin, form of material; produced by a rolling or beating process; usually of metal. Sheeting—Rigid or semi-rigid form of material, which gener-

Confusion in terminology has attended the rapid growth of technology in packaging. Definitions which may be perfectly clear in the separate industries from which they are drawn are at wide variance when brought together in the broad field of packaging. This article is the first of a series which will attempt to probe through ambiguity and point out possible areas of agreement on some widely used—and abused—packaging terms.

ally cannot be folded or made to form a close fitting wrapping for irregularly shaped objects; may be transparent, translucent or opaque. Sheets are cut or formed to definite dimensions; sheeting is of indefinite size, usually cut to size by user."

Two sources from the paper industry add their thoughts. The first says: "Sheeting is a very general term applying to any material, whether metallic or organic in origin, whether continuous, fibrous or woven, which has as its thickness a dimension very small when compared to its other dimensions. A film is a continuous material of organic origin having as its thickness a dimension very small when compared to its other dimensions. Foil would then be described as of metal origin having as its thickness a dimension very small when compared to its other dimensions."

The other prefers this: "The word 'film' should be used exclusively for plastic sheets made from other than cellulose; that is, cellophane would not be called a 'film' on this score, but a 'sheet.' The word 'foil' should be applied to any sheet or film in which is incorporated a continuous, metallic foil; that is, it would exclude films or sheets coated with metallic powder. 'Sheet,' which seems to be preferable to the word 'sheeting,' should be applied to materials composed in any part of cellulose, either in the form of cellophane or paper, provided that it does not have incorporated with it a metallic foil, or that the cellulose has been converted to an ester or ether such as cellulose acetate nitrate or methyl or ethyl cellulose, when the sheet would then be a film."

A textile man says: "A sheeting is a plain woven carded cloth in medium to heavy weights and suggests the word not be used when you are talking about plastic film manufacture, particularly if you are talking to textile men."

A thin metal membrane producer says: "Foil is defined in reference to metal only and represents that material rolled to a thickness less than 0.006. The word 'films' is normally associated with the idea of a relatively thin but essentially continuous layer of either organic or inorganic materials. Sheetings are used in reference to either cellulosic or non-cellulosic materials which are usually further defined by limitations to standard thicknesses, sizes or weight per ream."

Another metal company prefers: "For many years the word 'foil' has been used in the trade generally to designate rolled metal not thicker than 0.005. Generally speaking, it would, of course, be less confusing if the word 'foil' were used only for metals as in past years. Perhaps some of the confusion has come about because of lack of general knowledge that the word 'foil' is an old metal trade name used for many years for rolled metal of light gauges."

A careful examination of the table reveals a strong tendency to define foils as thin metals and the value of 0.005 as an upper limit of thickness occurs most frequently. Also, in no cases does the word "metal" appear in any of the definitions for films or sheetings. Therefore, the following is suggested as a definition for "foil":

> "A smooth metal structure up to 0.005 in. in thickness, of a composition (metal or alloy) and/or formulation (temper) which will allow easy forming or wrapping (i.e., flexible)." A further definition must be added that: "Metal membranes with surface proturberances, depressions or designs made into the metal shall be known as 'embossed foils.' When metal foils are combined by adhesion to other meterials, they shall be called 'laminated foils.' "

A further study of this table reveals a tendency to differentiate between films and sheeting by a thickness difference, the films being of a lesser thickness than sheetings. This is characterized either by a given thickness range or by the use of the word "thin." The word "flexible" occurs twice in this tabulation out of twelve possibilities and the word "transparent" also occurs twice.

It can be concluded that the definitions of "film" as contrasted to "sheetings" reveals little conclusive differentiation except in terms of thickness, the most common point of division being 0.005 in.

The following definitions are suggested as fulfilling the intent of current usages:

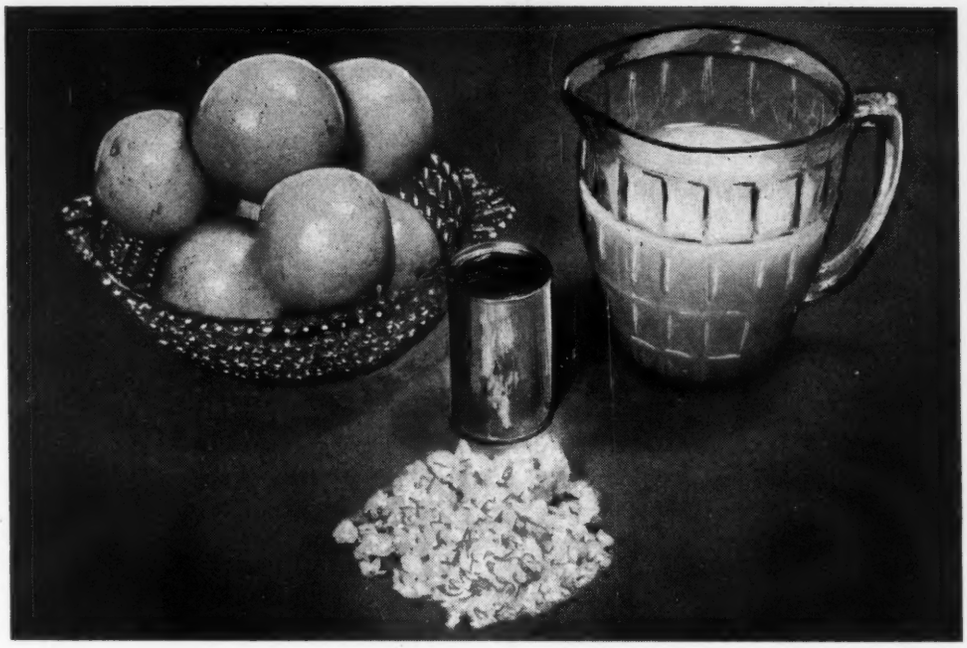
> Films—to be defined as "any flexible, organic (non-metallic), non-fibrous membrane of not over 0.005 in. in thickness."
>
> Sheetings (non-textile)—to be defined as "any rigid, organic (non-metallic), non-fibrous material over 0.005 in. in thickness."
>
> Sheetings (textile)—"A plain woven carded cloth in medium to heavy weights."

These definitions are submitted in the hope that a careful study by a larger number of users and manufacturers of these materials will suggest refinements and improvements or show fundamental reasons why these definitions are inadequate. It would be desirable to have constructive suggestions for new definitions which will be definitive, comprehensive and acceptable for usage by all of packaging.

TABULATION OF DEFINITIONS

Inquiry Source	#1 *Vinyl*	#2 *Vinyl*	#3 *Vinyl*	#4 *Acetate*	#5 *Acetate*	#6 *Plastic*	#7 *Cellophane*	#8 *Government*	#9 *Paper*	#10 *Paper*	#11 *Textile*	#12 *Metal*	#13 *Metal*
Foil	Up to .005"	.004" to .010"	Thin metals	Up to .002"	Up to .002"	Metal up to .005"	Thin metal	Usually thin metal	Thin metal	Metal		Metal up to .006"	Metal up to .005"
Film	.005 to .012	Up to .003	Up to .005" *	.003 to .010 *	Over .003 *	Non-metallic up to .00275"	Flexible transparent *	Thin flexible, transparent *	Non-metal thin	Plastic materials not cellulose		Thin layers	
Sheeting	Over .012	Over .010	Over .005" *	Over .005 in sheets	Over .005 in sheets	Non-metallic, not paper over .00275		Rigid	General term	Cellulose alone *	Woven cloth *		

*With further qualifications see original statement.



1—*Orange juice crystals in tin can, showing liquid and crystal equivalents of six oranges. Vacuum-sealed metal can makes a satisfactory commercial container for food products dried by sublimation.*

Sublimation . . . its packaging requirements

*by Earl W. Flosdorf**

To what extent will dehydrated foods be accepted by the housewife? The answer to that question is one which is variously debated. One thing is certain, however, and that is that the higher priced foods—those which have sufficient value to be dried by sublimation—will find wide acceptance because reconstitution is instantaneous and quality is scarcely distinguishable from that of fresh foods. The method of drying used is the same as that by which blood plasma and penicillin are dried: The product is frozen and then under high vacuum is dried without melting.

Removal of the water from the product while it is frozen is basic principle of drying by sublimation. This process is well known industrially as "freeze-drying." Since the product is frozen while being dried, the molecular structure is locked so that changes cannot occur during dehydration. Bacteriological action is prevented. Also, because drying is at very low temperatures, the loss of highly volatile components is reduced to a minimum.

The frozen product, oftentimes in the final market package (e.g., blood plasma, penicillin) is dried under high vacuum. A low vapor tension in the vacuum system causes sublimation of the ice and the rapidity of evaporation keeps the product frozen until dried. Either a low temperature condenser, a desiccant or direct pumping (mechanical pump with oil-water clarifier or multi-stage steam ejector) is used for removal of the water vapor. It is necessary to heat the product rapidly so that the rapid evaporation will not lower the temperature too far, but at no time does melting of the product occur.

Drying by sublimation, as indicated, has made it possible for blood plasma and blood serum to be taken to the military forces of all the United Nations. It has made it possible to produce albumen prepared from plasma, although the final product in this case is distributed as a highly concentrated solution. Other fractions of plasma soon will be in production for wide peace-time uses. Now, sublimation is making another major contribution in the stabilization of penicillin. In less spectacular fashion, this art is also serving as an essential tool in many research projects which are as yet unknown outside of the laboratories in which they are being carried on.

Drying by sublimation represented one of the major streams of investigation that gave birth to the American blood plasma program (1, 2).[1] Another stream of investigation involved the laboratory study of the mechanism of secondary shock resulting from hemorrhage, trauma, toxemia and burns. And still a third stream of investigation was one of accumulation of clinical experience with the administration of liquid human plasma and serum as a substitute for whole blood in treatment of secondary shock and allied conditions. It was found that in certain cases—for example, where there is shock without hemorrhage—blood plasma is even superior to whole blood. The confluence of these three streams of inves-

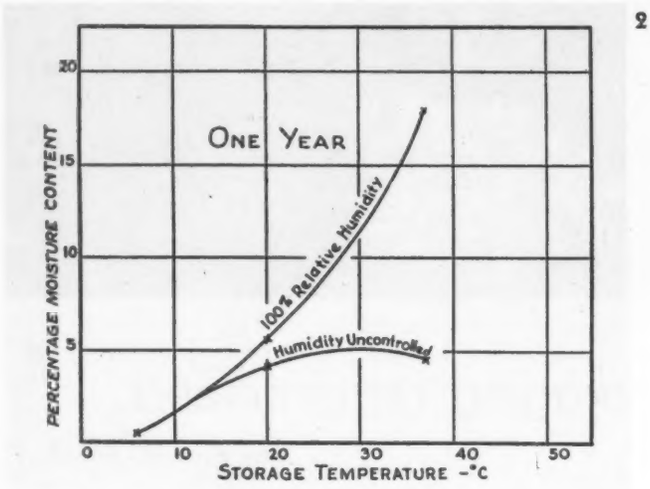
[1] Numbers in parentheses refer to "References" appended.

Dehydration by sublimation reduces moisture content to a level lower than is possible by any other means. Recent improvements in sublimation equipment have greatly speeded up production and lowered cost, and the method has been extended to foods, for which it gives a superior dehydrated product. Packaging requires absolute and permanent exclusion of moisture vapor; vacuumizing or gassing in either metal or glass has proved effective and some foil packages are satisfactory.

* Director, Research and Development, F. J. Stokes Machine Co., Philadelphia, Penna.

tigation resulted in an extensive program for taking dry and stable blood plasma to the battlefield right in the packages in which processed, and resulted in an enormous reduction in fatalities among our war casualties.

During the past decade tremendous advances have taken place in drying by sublimation. What a decade ago was scarcely more than a laboratory curiosity has now become a major process in the biological and pharmaceutical industry. The major recent improvement in process as well as in equipment used has come about in some measure as a result of commercial experience, although most is traceable back to the developments of the research laboratory of about ten years ago. The original art is old and dates back to 1909; the laboratory development and subsequent history have been traced with full bibliography given (2). Not until 1935 had the art been developed so it could be used commercially (1), our main contributions including establishment of proper surface relationship of frozen product for fast and complete drying in final market containers with exposure to heat (from the atmosphere) and equipment for medical products with dry-ice condenser and manifold for sterile processing in final market containers. Later, other advances were made in equipment and manner of processing.



2

2—Increase in the moisture content of products stored in moistureproof but not vaporproof packages. Note that the relative humidity when uncontrolled in the test chambers becomes very low at the higher temperatures.

3

3—Containers found satisfactory for permanent exclusion of moisture from sublimated products: from left, a collapsible metal tube with special hermetic seal, a vacuum-sealed tin can, two special all-glass containers carrying rubber stoppers seated within their hermetically sealed stem. The tube and can each enclose rubber-stoppered bottles which actually contain the dried product.

Orange juice offers great promise for drying by sublimation. Not only are problems of juicing and of garbage disposal eliminated in institutional use, in dining cars and the like, but dehydrated orange juice also offers a greatly expanding market around the world where today distribution of fresh fruit is impracticable. This applies also to the juices of many tropical fruits, such as those of guava, naranjilla and papaya. Even dehydrated pineapple juice may be brought to the American market with a flavor which only those who have been fortunate enough to travel to places like Hawaii have tasted.

The qualities of rapid reconstitution and flavor are such that dehydrated cow's milk may some time find a wide market. But for goat's milk there is an outstanding opportunity. A strong odor may develop in liquid goat's milk during the distribution. By drying from the frozen state, this is avoided, and drug store counters eventually may carry a product which people will find indistinguishable in taste from the cow's milk to which they may be allergic. Goat's milk dried or concentrated by other methods has an unnatural flavor.

From vegetables such as carrots and peas an excellent product is obtained which reconstitutes in a few minutes, with flavor comparable with that of frozen foods. With such products as these, however, the cost of the operation probably would prohibit application except for special purposes. Whole oysters, clams, fish fillets, raw meats, juices of berries such as strawberries, soups, corned beef and other meat hashes, cooked cereals with milk or cream, tomato products, coffee (with or without cream) and milk, are some of the products offering interesting possibilities for specialty markets. They all have been dried successfully. Only water, hot or cold as required, need be added to make some of them ready for serving. Others, like oysters, are ready either to serve raw or cooked in the usual ways.

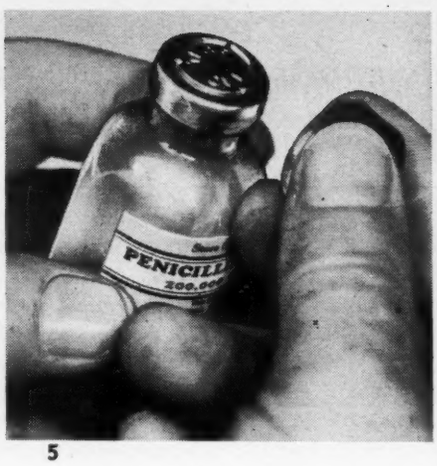
Low final moisture

In drying by sublimation, the final content of moisture is reduced to a very low level, preferably well under 2% for foods and 0.5% for biological and pharmaceutical products. Products dried this way are extremely hygroscopic, with such a low content of moisture that packaging requirements are very rigid. Moistureproof is insufficient; the packages must be vaporproof.

Because of the hygroscopic nature of the products, packages must be of a single-use size and type. Otherwise, in the short time that the cans would be open for removing some of the product, sufficient moisture would be absorbed to cause harm to the remainder of the product.

It has been found, in testing suitability of packages, that the relative humidity must be carefully controlled if the results are to be open to interpretation. For accelerated tests, it is well to control the humidity close to 100% at whatever temperature ranges are used. If this is not done, the humidity in ordinary heated test chambers may become quite low

4



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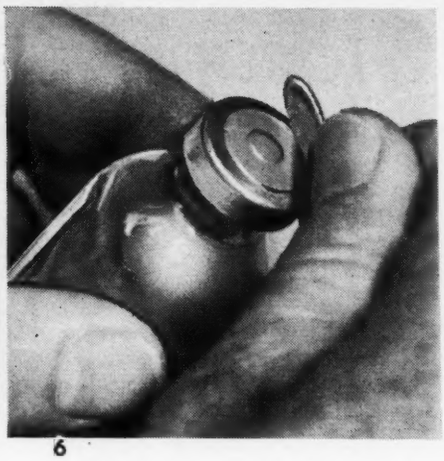


6

4—A low-cost, rubber-stoppered penicillin container which has the stopper protected by an aluminum seal and cap. **5**—*Here the cap is removed, exposing the aluminum seal and tear tab.* **6**—*Seal disc is lifted to expose the rubber stopper which may be pierced with a hypodermic needle to make the solution and to withdraw it.*

and, in fact, below that of normal room conditions. This effect is evident in the curves shown in Fig. 2.

Suitable packages for foods

Until now, only packages made of metal or glass have been found to meet the above requirements. Small tin cans meet the requirements readily. Extruded tubes of tin or aluminum with proper type of hermetic seal have been found, after testing over a period of years to be very well suited for certain products such as fruit juices and coffee extracts. Aluminum foil packages have been found to be entirely satisfactory and are particularly well suited for single-serving packages.

Air conditioning must be used during the packaging operation, with adequate reduction in humidity to prevent excessive absorption of moisture. Also it is well to have the temperature controlled.

Many products are entirely stable when sealed under air, provided practically all moisture is excluded. Foods containing fats or lipoids must be sealed either under vacuum or in inert gas because oxidation proceeds even in the absence of moisture. Tin cans and jars with proper seals may be readily used for vacuum-packaging. There is no reason why even foil packages could not be used for sealing in vacuo, but equipment for this purpose is still in the development stage.

Other small packages have been tested, but none other than those of metal or glass can be found suitable. Cellophane, pliofilm and various types of waterproof papers have been found to be insufficiently vaporproof for this purpose. In the case of certain foods, however, there may be reason to combine certain of these other materials with metal foil.

TABLE I—LOSS IN POTENCY OF DIPHTHERIA ANTITOXIN HORSE-GLOBULIN

Stored 45 wks. in rubber-stoppered vials. Initial moisture content —0.5%

Temperature C	*Relative Humidity %*	*Potency Units per ml.*
Original	.....	850
20	Uncontrolled	850
20	100	800
37	Uncontrolled (low)	800
37	100	750
45	Uncontrolled (very low)	800
45	100	450

Biological and pharmaceutical products

Medical products generally are dried in the final market containers in which they are distributed. This avoids subdivision and handling of the final dried and highly potent powder, this being a particularly difficult operation because not only are the products hygroscopic and the amounts often minute, but sterility must be maintained. Sterility is more nearly certain if drying is carried out in the final package, since bacteriological sampling is made representative more readily with liquids than with solids. Accordingly, filling the final market containers with liquid and testing before freezing and drying have met with greater favor.

In the February 1944 issue of MODERN PACKAGING a description of types of packages used for penicillin was given.[2] Since that time the all-glass ampoules described have been given up by almost all manufacturers. Also, since that time, the price of penicillin has been greatly reduced and, in an effort to hold this at a minimum, competition has forced the elimination of the more expensive flame-sealed ampoule in most cases. An ordinary molded type of bottle or vial is used (in some cases, bottles prepared from tubing). In this, an ordinary rubber stopper is used as a closure, and this is protected by means of aluminum metal caps. One of the first of such packages was described in the June 1944 issue of MODERN PACKAGING.[3]

Small amounts of water vapor which pass through the rubber of a stopper are not particularly serious with products packaged in large amounts of solids per single dose. This is the case with blood plasma. With products like penicillin dispensed in smaller amounts, however, the content of moisture in the solids rises more rapidly, since the actual weight of vapor passing through the stopper varies more with the size of the stopper than it does with the contents of the bottle. This is the reason for the use initially of flame-sealed ampoules. On the other hand, the rubber stopper is highly advantageous for use by the physician with products designed for parenteral injection, since the needle of his syringe may be used readily for piercing the stopper in reconstitution and withdrawal of the dissolved product. The vipule described in the February 1944 article referred to, as well as other similar containers, has been designed to meet both the requirements of exclusion of moisture plus ready use by the physician. The rubber stopper is seated (*Continued on page 164*)

[2] "Penicillin," pp. 53–60, Feb. 1944.
[3] "Innovations in Penicillin," pp. 79–82, June 1944.

Glassine . . . its improved packaging properties

*by C. W. Hoffman and E. G. Penn**

For more than 35 years the glassine industry has been supplying its products—glassine and greaseproof papers and their modifications—for the packaging of innumerable products. The history of glassine spans that of packaging itself.

The versatility of glassine was never more clearly shown than during the last four years when, in common with many other products of the paper mills in this country, glassine was called upon to help remedy the serious shortage in packaging materials caused by the loss of tinplate, metal, foils, rubber products, etc. That the industry accepted this challenge and did a good job is, of course, a matter of record. Now the glassine and greaseproof industry is busily engaged in consolidating its developments into glassine packaging for "tomorrow."

The usefulness of glassine and its derivatives in meeting a wide variety of packaging protection problems has long been recognized. Various formulations may be used wherever there are considerations of oils and greases, flavors and aromas, moisture loss or gain, or contamination by vapor or bacterial infection after packaging. Glassine has advantages wherever mechanical operation is a factor, or where transparency, heat-seal or attractive printing is desirable.

The basic qualities of glassine are derived from a combination of specially made pulp, a particular kind of manufacturing equipment and an experienced skill in the use of that process which produces a sheet suitable for establishing continuity of film, as in the use of waxes, lacquers, laminates, offering water-vapor protection with minimum cost. (Table I.)

The term "hydration" which so often is used in connection with glassine is the result of a mechanical treatment or beating of the fibre. Water is driven into the cellular structure until the fibres have become nearly gelatinous and the formation of these fibres with other cellulosic products of hydration tends to approach a continuous film of cellulose. The presence of the water in the sheet resists oil and grease penetration. After the paper is formed and dried on the paper machine, it is redampened and super-calendered under tremendous pressure and heat. The paper then reaches its maximum density, having a high surface finish and considerable transparency and at this point it is called glassine.

If the super-calendering is omitted, the paper is not as smooth and not as transparent although the other inherent qualities are there. In this form it is known as greaseproof paper. Various general properties of glassine and greaseproof papers are given in Table II.

TABLE I—AVERAGE WATER-VAPOR TRANSMISSION RATES WAXED, COATED, LAMINATED GLASSINE (FLAT SAMPLES, GFWVT CABINET)

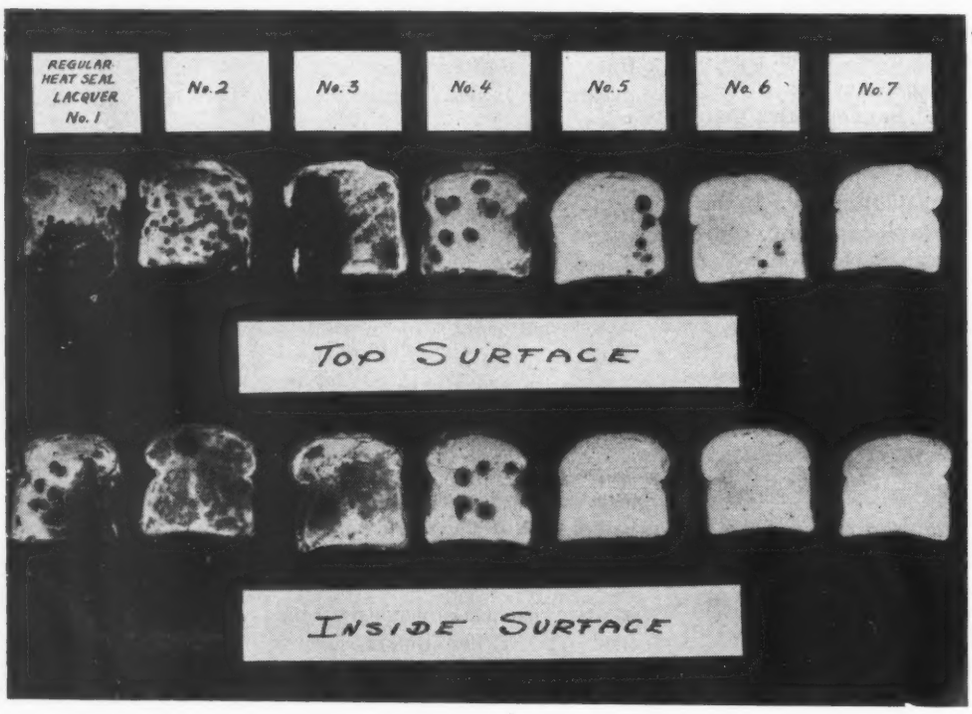
Grades	*Grams/100 sq. in./24 hrs.*
Laminated glassine (waxy laminant)	0.40 to 0.70
Laminated glassine, waxed both sides	0.05 to 0.15
Waxed glassine, single-ply waxed both sides	0.10 to 0.30
Lacquered glassine, adhesive seal, both sides coated	0.15 to 0.25[1]
Lacquered glassine, heat seal, both sides coated	0.10 to 0.40[1]
Lacquered, laminated glassine, both sides coated	0.10 to 0.15[1]

[1]Depending on type of lacquer.

Wet-strength glassine

One of the most recent outstanding additions to the list of valuable functional qualities of glassine and greaseproof paper

* Both of the Riegel Paper Corp., New York.



1

1—Results of test of antimycotic coatings on glassine bread wrappers. Two slices of bread were wrapped in each of seven papers, including one with regular heat-seal lacquer coating (far left). Wrapped slices were stored at 100 deg. F. and 100% R.H. for one week. Note complete absence of mold on samples shown at the extreme right.

2

2—This test sought to determine whether protectiveness of treated papers had diminished through evaporation of anti-mycotic agents. Test papers were left exposed for 3 weeks since first test. Whole loaves were used. From left: unwrapped bread; regular waxed wrapper; regular heat-seal lacquer glassine, and Nos. 6 and 7, anti-mycotic papers from first test. Test period and conditions were same. Note absence of mold on 6 and 7.

is the development of wet-strength characteristics. This is the ability of the material to retain a high degree of its original dry strength when in contact with water. This has brought an entirely new series of glassine papers to the packaging fields. Their greaseproofness and water-vaporproofness when waxed, coated and laminated make them suitable for the packaging of frozen food, dairy products, meats, etc.

In the past, various additives have been used to impart so-called wet strength to paper. However, recent discoveries have given to the paper industry synthetic resins having unusual properties in the wet-strengthening of glassine. One type of resin may be applied to the fibre before the formation of the sheet and attaches itself to the fibre as a colloid. Another type of resin can be either incorporated in the beater or impregnated in the sheet after the sheet is formed but only partially dried. These resins in the subsequent drying period then polymerize to an insolubility, binding the fibres together even after long immersion and soaking with water. These developments have provided the paper industry with a material which, in addition to giving wet-strength characteristics, will improve the general toughness of the paper under normal conditions and will not adversely affect pliability. This is important to the obtaining of maximum production in operation on packaging and converting equipment. These properties are now being offered by the glassine manufacturers when wet-strengthness is useful or a basic requirement.

In general, glassine so treated, when tested by standard tensile testing equipment after a two-hour immersion period at

TABLE II—GENERAL PROPERTIES OF GLASSINE AND GREASEPROOF PAPERS

	Greaseproof papers	*Glassine papers*	*Waxed glassine*	*Laminated glassine*	*Lacquered glassine*
			General Protective Functions		
Greaseproofness	Yes	Yes	Yes	Yes	Yes
Flavor retention	Yes	Yes	Yes	Yes	Yes
Wet strength	Available	Available	Available	Available	Available
Resistance to gas transmission	Fair	Fair	Good	Good	Good
Water - vapor-proofness	No	No	Yes	Yes	Yes
			General Package Forming Qualities		
Pliability, softness	Yes—in plasticized grades	Yes—in plasticized grades	Yes—in plasticized grades	Excellent	Yes—in plasticized grades
Glue seal	Required	Required	Can be used	Required	Can be used
Heat seal	No	No	Yes but of limited strength	No	Yes, very positive
			General Adaptability to Visual Functions		
Transparency	No	Satisfactory	Good	Fair	Good
Smooth surface	No	Yes	Yes	Yes	Yes
High gloss surface	No	No	Yes, but will smudge	No	Yes
Gloss printing available	No, but prints well	Yes	Yes	Yes	Yes
Colors, transparent	No	Yes	Yes	Yes	Yes
Colors, opaque	Yes	Yes	Yes	Yes	Yes

room temperature, will show from 25 to 40% retention of its original dry strength on basic glassine or greaseproof and approximately 50% or better upon laminating.

In considering the application of these new glassine products it is well again to distinguish between three similar sounding but decidedly different qualities. These are as follows:

1. *Water-vaporproofness*—This is the ability of certain barriers to resist, in varying degree according to kind and make-up, the transmission of water in its vapor phase—*no liquid water* being involved. An example is in the drying out of packaged bread or tobacco.
2. *Water-resistance*—This is the ability of the material to shed water; that is, to repel water without becoming wet. Common examples are oil-skin raincoats, which, while quite waterproof, may not have appreciable ability to keep water vapor from passing through their structures.
3. *Wet strength*—This is the quality whereby certain materials retain an appreciable portion of their dry strength even when they are thoroughly soaked with water. These materials do not necessarily have either water-vaporproofness or waterproofness, although in the case of wet-strength glassine both may be added.

For example, consider the packaging of frozen vegetables such as peas or spinach in comparison with the packaging of frozen fruits-in-syrup. In the former case, the vegetables are blanched in hot water or steam to stop the enzymatic action and they are wet with small amounts of water as they are packaged to go to the freezer. While not in great quantities, the amount of water is enough to weaken standard paper and through subsequent mechanical failures to cause loss of the special protective qualities for which it is employed. The addition of wet strength obviates this hazard as well as failures caused by moisture condensation on the package due to temperature changes. Such water is not shed; it literally wets the paper but causes no harm.

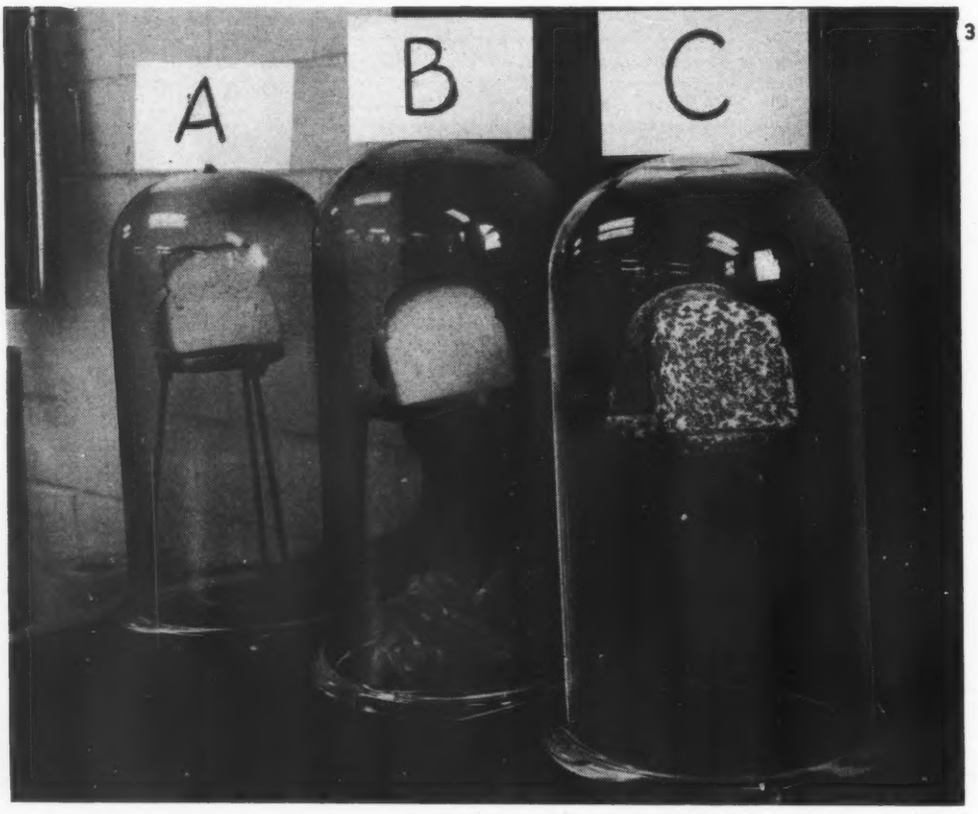
In the case of the frozen fruits-in-syrup pack, there is a considerable quantity of water present and the barrier must repel that water without itself becoming wet. Therefore, in addition to wet strength, such paper also must be waterproof. Thus wet-strength laminated glassine is recommended. It has a history of success as a water-vaporproof wet-strength lining for frozen vegetable packaging. However, unless treated with a subsequent wax or lacquer coating, it is not recommended as a waterproof lining for frozen fruits even though it may be water-vaporproof and have wet strength.

A great deal of research is being conducted in the glassine industry to improve the general strength and folding characteristics of glassine and greaseproof paper. One outstanding development in the last year, and one which shows great promise for the future, is the development of pulp for glassine manufacture involving chemical treatment and a secondary mechanical refining to complete the pulping action. This process promises to yield pulp retaining chemical characteristics which offer good hydrating properties, giving large increases in strength with the retention of greaseproof properties. In addition, research is going forward on other types of fibre, all with the ultimate aim of improving the general strength and folding characteristics of glassine and greaseproof paper. While this superior strength glassine is not yet commercially available, the future promises a glassine with added strength involving all the protective qualities now available. One application for a sheet of this type would be a tight-wrap for general overwrap packaging.

Anti-mycotic glassine

New developments are taking place involving the use of mold-inhibiting agents, which promise to find widespread use in the packaging of food products such as bread, dairy and meat products; also for soap products, textiles and many other products subject to mold or mildew.

The economic loss suffered through the action of the hun-



3

***3**—This test showed that mold inhibition is due to vaporization and not to direct contact with bread. Bell jars were installed in high-humidity room at 100 deg. F. and 90–95% R.H. Each jar contained three slices of bread. Watch glass containing one drop of anti-mycotic agent was placed under tripod in "A"; piece of bread wrapped with the agent in "B"; nothing in "C". Photographed after one week, bread in "A" and "B" jars were completely devoid of mold, "C" was covered with various molds.*

dreds of genera of fungi and molds upon the products of many varied industries is well known. The methods of prevention of mold and mycotic growth differ widely, depending upon the nature of the product to be protected and upon the way in which the product is manufactured and distributed. One of the most promising materials at present is compatible with nitrocellulose lacquer, requiring only small quantities of the material, as the resulting action is dependent upon its vaporization. This material, used in connection with certain packaging papers, promises to increase the shelf life of some products and result in lower returns of rejected foodstuffs.

During the last year considerable work has been done with a commercial lacquer-coated glassine widely used for the packaging of breads. In accompanying photographs (Figs. 1, 2 and 3) may be seen a demonstration of what may be accomplished through the use of an anti-mycotic agent in coated glassines for the packaging of bread.

Laminated glassine

There being no single flexible packaging material known to resist all of nature's processes, it was quite logical to combine materials with known resistance to certain elements by means of lamination. Thus, laminated glassine was developed some time ago to provide a basic material with added resistance to water-vapor transmission; it is widely used in packaging today. The needs of wartime packaging prompted further research on lamination and resulted in tremendous progress.

One result is three-ply laminated glassine, which offers excellent resistance to water-vapor, increased strength and more pliability than is found in other forms of the material. With the addition of heat-seal coatings, these combinations provide material for products needing extreme protection.

Much progress has been made in the lamination of glassine to materials of a foreign structure; there are many new and practical combinations. For instance, the qualities offered by a combination of aluminum foil laminated to coated glassine are more like those of rigid packaging materials than flexible ones. Other combinations include glassine laminated to cellophane, acetate, board stock, and many special non-glassine papers. New and versatile waxes, hot melts and emulsions now in the development stage will result in still further laminations of glassine and greaseproof papers with properties long sought to prolong shelf life of many packaged products.

Coated glassine

As mentioned previously, the smooth, non-porous surface of glassine provides a very suitable base for all types of lacquer coatings. Such coatings include organic colloids such as nitrocellulose, resins, cyclized rubber, etc., which require organic solvents as vehicles for application; also, the counterparts of these, which melt at a sufficiently low temperature to be thermoplastically applied. These coatings, although expensive in themselves, can be applied to glassine in sufficiently small quantities to produce an economical packaging material.

The normally good transparency of plain glassine is greatly improved by such coatings and work is being done to improve still further the transparency of coated glassine.

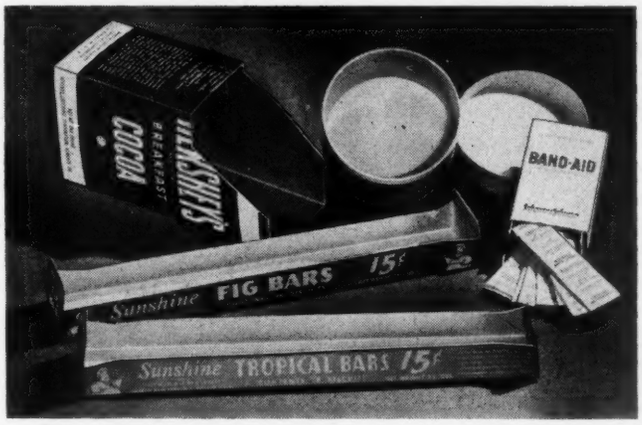
In addition to heat-sealing qualities, extremely low water-vapor transmission rates are achieved. Within a short time, the return of natural rubber will make available many of the prewar coatings derived from rubber as well as many new ones developed in the laboratories during the war. Such coatings promise even greater protective qualities when applied to glassine; in combination with a stronger glassine, they will find widespread use in many of the packaging fields.

Other new coatings for glassine include hot melts and brighter metallics for decorative as well as protective use.

4

4—Above, a locker bag lined with wet-strength laminated glassine; below, a frozen-food carton with wet-strength greaseproof glassine laminated directly to inner surface.

5



5—Medical items such as the individual Band-Aids use cellulose glassine. The Sunshine cracker-tray and Hershey cocoa container use glassine to make a greaseproof lined board. The same material lines a fibre can for Nestle.

Embossed and colored glassine

New pastel shades in glassine papers will offer something of interest to the trade for fancy package liners, greeting cards, envelope liners, etc. Metallic-coated and embossed glassine will blossom in new patterns for decorative appeal.

The production of colored glassine was practically eliminated during the war, but with resumption of manufacture, more brilliant shades will be produced with greater permanence to light and with greater resistance to mild alkalis and acids. Aniline and rotogravure printing on glassine has kept pace with the trend toward eye appeal through beautiful design, and promises to become more economical than was previously thought possible.

Other developments in glassine include the improvement of resistance to alkali for wrapping of soap and soap products.

New lustrous plastic . . . cellulose propionate

A new cellulose plastic with interesting packaging possibilities was introduced by the Celanese Plastics Corp. at a luncheon in New York, October 17. Classified as cellulose propionate, the thermoplastic material will be marketed by Celanese under the trade name "Forticel." It is recommended for injection and extrusion molding.

Articles molded of cellulose propionate give an immediate impression of high surface luster, rich color and a warm feel. The brilliant luster is obtained in the mold, without any mechanical polishing. There is a notable absence of mold marks, or weld lines, due to the superior flow qualities of the material. Colorability includes the full range of the spectrum, including various colored mottles and many intricate color designs.

Physically, the material appears to be superior to other cellulose plastics in impact strength, moisture absorption and dimensional stability—all qualities which may recommend it for packaging. Superior molding characteristics are said to permit production up to 25% faster and, because the plastic has a low specific gravity (1.2 or less), about 108 pieces per lb. can be obtained from cellulose propionate where only 100 would be obtained from cellulose acetate.

The new plastic is classified as "odorless," and according to the manufacturers the most delicately perfumed lipstick or face powder can be packaged in it without deleterious effect. Molded containers made of the plastic can be printed and lacquered with trade name or other copy without fear of tackiness, it is said.

Special types of Forticel will be manufactured into sheets and continuous films, which also may be useful in packaging because of good dimensional stability and toughness. In their present stage of development the sheets and films are not perfectly transparent, but the manufacturer expects that crystal clarity will be obtained later. These forms of the plastic are expected to lend themselves to all kinds of machining and fabricating, such as heat-forming, drawing, milling and cementing.

In presenting cellulose propionate, Celanese spokesmen made no claims that it was sensational or revolutionary, but stressed that it was superior in certain important properties and that of all the cellulosic compounds now being produced, it has the best balance of generally accepted desirable characteristics.

Cellulose propionate has been known for a number of years, but until now there has been no way of producing it commercially. One reason for this was that there had never been commercial quantities of propionic acid available because no one had been able to produce it at a reasonable price. Cellulose propionate is made by treating cellulose with propionic acid, much as cellulose acetate is made with cellulose and acetic acid.

Now Celanese is obtaining propionic acid in quantity from its new chemical plant at Bishop, Tex., where it is being produced along with other chemicals from natural gases by a special process.

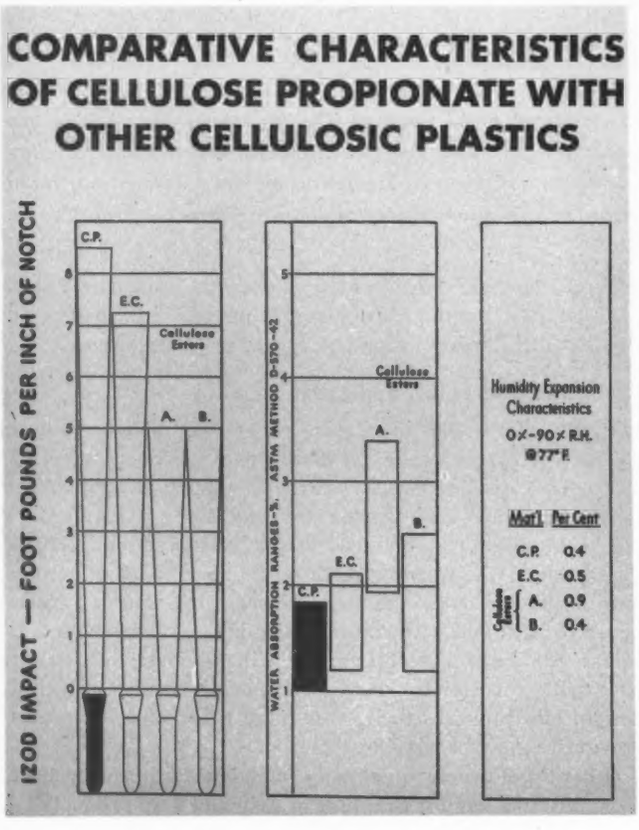
Although the price of cellulose propionate has not yet been made public, it is understood that it will sell initially for only a few cents a pound more than a comparable cellulose acetate molding powder and that its lower specific gravity will make the cost per molded article about the same.

Present production of cellulose propionate is limited to that of a small pilot plant, but the company expects to attain a steady, moderate production by Jan. 1 and will follow that with large-scale production as soon as plans already in operation can be carried out. Test quantities should be available to all interested parties after Jan. 1 next and volume production is scheduled for Jan. 1, 1947.

The accompanying illustration shows graphically some of the characteristics of cellulose propionate as compared with three other commercial cellulosic plastics as used, for example, in a flashlight housing. Relative impact strength in ft.-lbs. is shown on the left-hand side; the propionate took a punishment of $8^1/_2$ ft.-lbs. in the standard ASRM impact test before it broke, giving it double the resistance of the two other cellulose esters designated in the illustration as "A" and "B."

The middle portion of the graph shows the moisture absorption range for the same four plastics, given in per cent. The new plastic also excels in this property, and therefore has the greatest dimensional stability under varying atmospheric conditions.

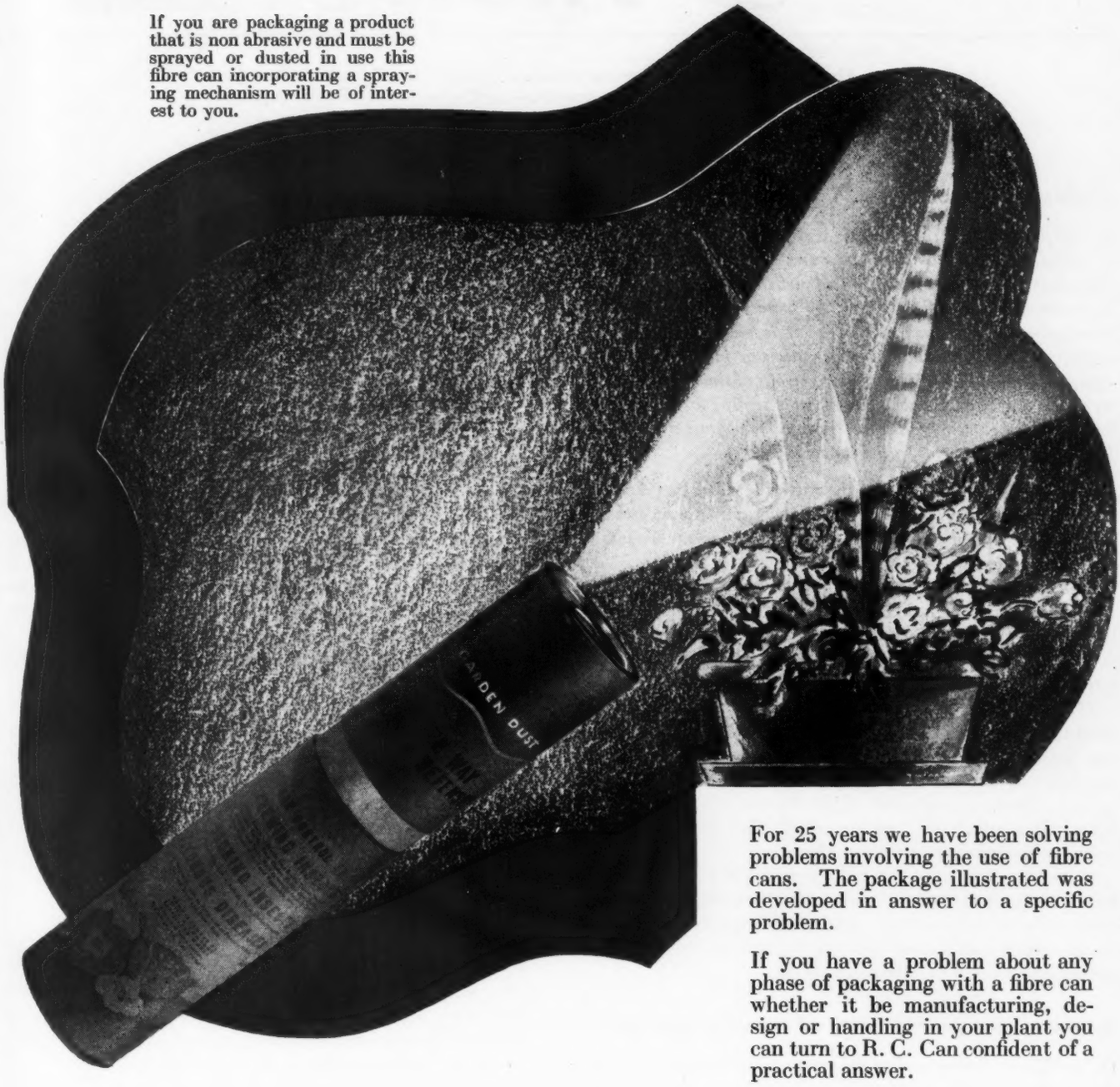
Figures shown on the right-hand side of the chart represent the expansion that takes place when the plastic is first conditioned at 0% relative humidity and then kept at 90% relative humidity until equilibrium is reached. Cellulose propionate has an expansion of only 0.4%, under this test, as compared with 0.9% for cellulose acetate.



A PERFECT PACKAGE

FOR NON ABRASIVE POWDERS

If you are packaging a product that is non abrasive and must be sprayed or dusted in use this fibre can incorporating a spraying mechanism will be of interest to you.



For 25 years we have been solving problems involving the use of fibre cans. The package illustrated was developed in answer to a specific problem.

If you have a problem about any phase of packaging with a fibre can whether it be manufacturing, design or handling in your plant you can turn to R. C. Can confident of a practical answer.

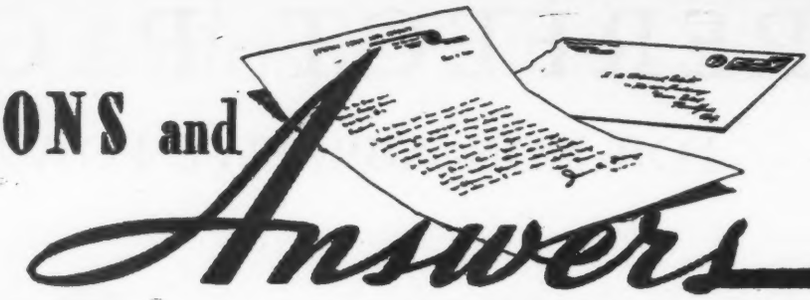
R.C. CAN COMPANY

Manufacturers of fibre cans, tubes, spools and cores
Head Office: St. Louis, Mo.
Branch Factories: Arlington, Texas; Rittman, Ohio; and Kansas City, Mo.
Sales Offices: Minneapolis, New Orleans, Atlanta, Memphis, Milwaukee, Louisville, New York, Pittsburgh, Denver and Los Angeles.

R.C. CAN CO. THE STAMP OF QUALITY ST. LOUIS, MO.

* Patented R. C. Can Co.

QUESTIONS and Answers



This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

High-strength container

QUESTION: We are packaging a signal device which requires a container of special durability and strength characteristics. Our unit is completely water- and moistureproof, so our primary concern is the character of the material entering into the fabrication of the outer container. It is our thought that the container should withstand disintegration or failure because of exposure to high humidity over long periods of time. If possible, we would also like to be able to remove the sealing tape if that can be used to take out one unit and reclose the container. Do you have any suggestions for such a container?

ANSWER: It is not possible to write a detailed specification of this kind without consulting with several manufacturers to see whether or not they are in a position to produce such a specialized item.

It is our suggestion that you contact various manufacturers in the fibre shipping case industry, giving them your requirements and that you further set up some testing procedure so that you may evaluate the various samples which are submitted by the manufacturers.

It is probable that your use requirement could be met by a solid-fibre, waterproof, laminated structure developed for war use, known as V-board. These boards are made in various weights, are resistant to disintegration by water or high humidity. Your requirement might be met by wax dipping other paper structures, but you would then encounter difficulties in resealing, etc.

It may be that you would require an added waterproof surface to be applied to the V-board, as the best chance of solving your problem successfully. The case-maker or the board-manufacturer can submit samples and advise you as to the proper adhesives or surface treatments.

Water-vapor permeability of cellulose acetate

QUESTION: I have noticed at various times that cellulose acetate has been labeled or called semi-moistureproof. Can you give me values for the water-vapor permeability of this material, in comparison with other commonly used packaging materials?

ANSWER: Laboratory transmission tests are run in accordance with the method described in AN-C-67b or JAN-P-117 and similar specifications and have shown that normal gauges of acetate transmit a very large quantity of water vapor. The following are typical values quoted for various gauges of cellulose acetate manufactured by different companies. The following table shows water-vapor premeability values for various thicknesses tested. Differences in transmission for different makes of film of the same thickness are probably due to differences in plasticizer content, composition of the resin, etc.

	Water-vapor transmission in gr. per 100 sq. in. per 24 hrs., 100° F. and 90% R. H.		
Thickness	*Make "A"*	*Make "B"*	*Make "C"*
0.00088 inches	103 grams	77 grams	....
0.00100 "	80 "	69 "	....
0.00120 "	71 "	66 "	....
0.00150 "	....	....	62 grams

Using $CaCl_2$ in test cup.

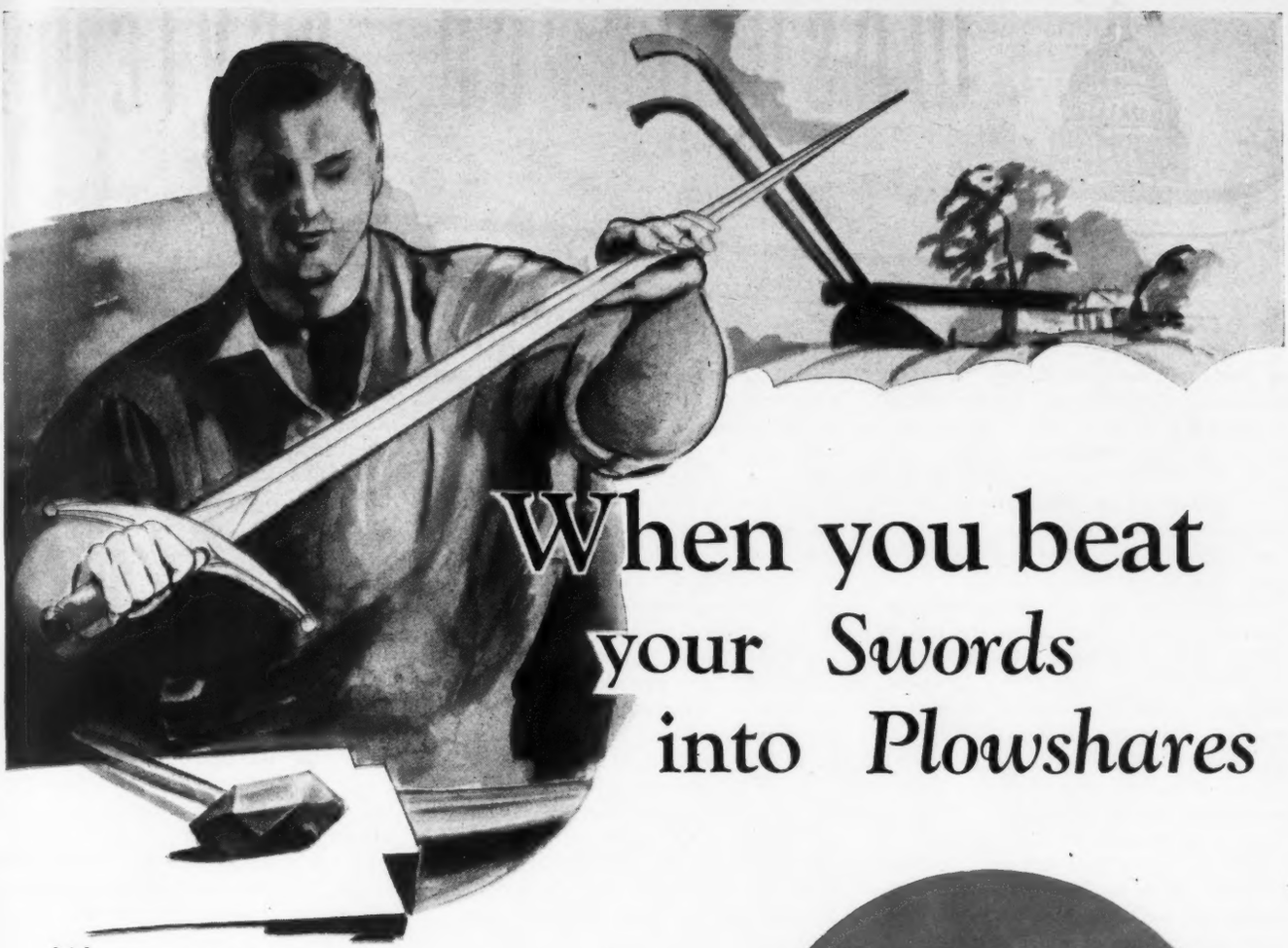
These values of water-vapor permeability are so high that there is little justification for calling this film even semi-moistureproof. In most government specifications the maximum value for moisture-vaporproof material allowed in Method II packaging is 0.25 gram. In commercial use, effective moistureproofness could be considered as beginning with the value of 1 gr. per 100 sq. in., but nearly all of the current material used for moistureproof packaging would show values of less than a gram. It is true that some grades of cellophane and certain grades of wax papers with low wax content and other specifications of materials would show values of more than 1 gram and if such were considered as semi-moistureproof, then the upper limit for this range could be in the neighborhood of 2 or 3 grams.

Even on this basis, cellulose acetate in normal thickness must be considered as having no effective water-vapor permeability resistance whatsoever.

Maintaining uniform test humidity

QUESTION: We have been having difficulties in maintaining uniform humidity in a package-testing cabinet which we have just constructed. The cabinet was designed to test packages of a moist product in a low-humidity atmosphere. It was our thought that we should not use a fan or a blower but use natural convection for maintenance of temperature and humidity. We have had no difficulty in maintaining uniform temperature by the use of radiant wall heating but have noticed that the humidity at the top of the cabinet is much higher than at the bottom. How can we keep a uniform and low humidity in this cabinet?

ANSWER: The phenomenon of higher humidity at the top of an enclosed space is due to the fact that water vapor is lighter than air. This fact has been the cause of many difficulties similar to which you are encountering. Apparently it is difficult to realize that water vapor is appreciably lighter than dry air at the same tempera- (*Continued on page 168*)



When you beat your *Swords* into *Plowshares*

We are again in a buyer's market.

When you beat your swords into plowshares, remember that everyone else is doing the same thing and rushing his goods to market.

Send your products into today's competetive markets in eye-catching, sales-compelling boxes by OLD DOMINION. Packages by OLD DOMINION have always been effective in increasing sales and our experiences in solving tough war-time problems have made our creative, engineering and production departments more resourceful than ever before.

Let OLD DOMINION plan and produce your boxes.

Fine Boxes for Fine Products

Call On

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PLANTS IN TEN SOUTHERN CITIES

Folding Cartons • Set-Up Boxes • Convolute • Spiral Wound and Corrugated Containers

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WASHINGTON REVIEW

● **Postwar Packaging Survey**—Postwar packaging trends in food marketing will be guided in a large measure by the developments in packaging which have come as a result of the war—either by way of substitution of materials in short supply or by way of improved materials and techniques developed to package the food sent to our fighting forces.

This is but one of the conclusions reached by a detailed study, the report on which has just been released by the Agriculture Department, on "Postwar Packages and Containers for Marketing Foods." The study undertakes to forecast the broad, overall picture of food packaging as it may be after complete reconversion has taken place and our economy begins to glide smoothly once again on as nearly a "supply and demand" civilian economy as it can under government regulations and subject to availability of materials—neither of which should have too great an effect.

The report, obtainable from the Bureau of Agricultural Economics, Department of Agriculture, was prepared by Delbert R. French, formerly Agricultural Economist, Bureau of Agricultural Economics, at the suggestion of the Working Group on Conversion of Marketing Facilities and Methods, Interbureau Committee on Postwar Programs.

Discussing the factors that may affect postwar packaging, the report asserts that the new packages for foods after the war "will appear as the result of influences operating from several sources." The packager, wherever he may be in the marketing channel, and the retailer, will have certain requirements which the new packaging must meet. First, they will expect the package to protect its contents until delivery to the consumer; any service less than this will react to destroy the good will which marketing agencies desire to build up. On the other hand, the marketing agencies will hold the reins tightly enough to keep costs of packaging down where it is necessary to enter into price competition. These are two of the main factors discussed by the report, which, while many of its conclusions are along the line of half-formed ideas held by "the trade" for some time, does contribute to the thinking of postwar planners by setting these ideas, and new ones, down on paper in concrete form.

"The probable expansion of self-service merchandising will be a strong force for better packaging of food products that have already gone from 'bulk sales' into packages," the report observes, adding the comment that "The package is the salesman in the self-service store," and there will be no sentiment against changing one salesman for a better one. Also, self-service methods will exert a strong pressure toward prepackaging of fresh fruits, vegetables and meats. "The example of these products packaged in frozen form," the report says, "will be an influence toward offering them prepackaged in fresh form."

Discussing the influence the housewife will have on postwar packaging of food, the point is made that when it is not possible to view the product directly in an open container or in a grocer's scoop, the shopper will expect the package to permit a view of its contents, through transparent walls, a transparent "window," or by a realistic pictured likeness on the package.

Other factors in consumer choice will be improved transportation which will carry shoppers to the stores with convenient displays; an increasing proportion of small home-dwelling units which will have limited storage space and encourage small-lot purchases; more women working outside the home than in prewar days, demanding more prepared foods.

"In choosing the type of package and materials for packaging a product, the packer will need to consider the nature of the product itself, conditions under which the food is to be marketed, types of materials available for manufacture of the package or container and the extent to which the package should be decorated for customer appeal. He will want to examine carefully some of the new developments in the packaging field."

Some of the new, war-engendered developments referred to in the above-quoted paragraph from the report are discussed in it. Among them:

1. Substitution of fibreboard shipping containers for wood, which is "likely" to continue in the postwar era. In this connection the study asserts that "the water-resistant qualities of V-board lead to the expectation that fibreboard crates for the shipment of fresh fruits and vegetables will be common after the war.

2. Laminations of transparent films, foils, asphalt paper, waxes, and other materials in folding boxes. Says the survey: "Expanded use of folding boxes after the war is likely for staple groceries, and in addition, many new adaptations of folding boxes to the packaging of fresh fruits and vegetables can be expected."

3. New types of drums—those produced from aluminum, plywood and fibreboard—plus the use of various coverings, linings and laminants.

4. New developments in the field of flexible packaging materials—paper, transparent film and metal foil.

5. Use of multi-wall bags, either with or without lamination.

6. New techniques for cutting packaging costs and new packaging machinery to save manual labor. Packers, the report says, "would do well to have access to the knowledge provided by continuous research on materials and methods."

In conclusion, the report sums up with: "It is anticipated that:

"Prepackaging of foods formerly sold from bulk will greatly expand. This trend will probably encompass fresh fruits, vegetables and meats. The cost of packaging per unit of product may be increased as a result of new packaging, but this will be at least partially offset by savings in labor, waste and transportation. Other compensating returns will accrue to producers and consumers as well as to marketing agencies.

"Since more efficient packaging materials will be available, the tendency will be to package a larger proportion of foods at or near the producing area, in the case of fresh products, and in the plant of the manufacturer for processed foods. Economies in handling and improvement in quality will result.

"New kinds of materials and new types of containers will accompany the use of changed transportation equipment. For instance, lighter and less expensive containers for shipping fresh vegetables dry-pack would go along with the installation of dry refrigeration equipment in refrigerator cars. With lighter containers, pay loads that make possible the installation of dry refrigeration in trucks will be feasible.

"The invention of transparent films and other materials which permit the prepackaging of fresh products will also call for an extension of refrigeration

"Deep breathing might have something to do with it"

SURPRISINGLY enough, people bring similarly tidy problems to us. As when a manufacturer of calcium hypochlorite had difficulty packaging his product.

This chemical is unstable, corrosive, sensitive to moisture, and is required to be packaged in resealable cans. This presented a packaging problem for which no satisfactory container had been developed. Could we fix?

Well, we could try . . . Yep, we came through—by designing the "breather can"—a moisture-repellent container which incorporated means for the gases to "breathe," and a lacquer to retard chemical action.

"Cangenuity," our ability to combine ingenuity with can-making experience, is one of the many ways you profit when you deal with Crown. And it's a good place to start. If you have packaging trouble, tell us your symptoms.

CROWN CAN

INDEPENDENT AND HELPFUL

CROWN CAN COMPANY • NEW YORK • PHILADELPHIA • Division of Crown Cork and Seal Company, Baltimore, Maryland

toward the producing area packing house, if not into the field, and also will call for additional refrigerated cases for displaying fresh products in the store.

"Designers of store buildings and equipment will need to take into consideration the increased sale of packaged goods, especially fresh foods, and will need to plan for proper display space in refrigerated cases.

"Packaging will become an increasingly important element in marketing as technological advances in processing and merchandising new products come into common use and as an increasing proportion of retail trade in foods is handled by self-service stores.

"The wartime development of new kinds of packaging materials and methods, in conjunction with other technological advances, will materially affect the competitive position of prewar types of packaged foods and result in important shifts in the proportions of all food sold fresh, canned, bottled and packaged in other containers."

● **Dissolution of WPB**—With the dissolution of the War Production Board, effective November 3, the new agency has taken over necessary new functions.

In announcing the new agency, which took over WPB said:

"The WPB's task of production for war has been completed, and WPB's record of accomplishment during the war years speaks for itself.

"The Civilian Production Administration will take over and will carry forward those remaining WPB functions and controls that are required during the transition period of reconversion. . . ."

(Incidentally, all references to the WPB in these pages, are equally applicable to the CPA.)

● **About Controls**—Since so many of the divisions of WPB have voluntarily folded up, either from lack of work or from the fact that the active workers in the divisions have wanted to go back to the industries from whence they came, it is reasonable to assume that all controls except those which actually affect the general welfare will be cut off perhaps by the time this is printed. Discussions with persons at WPB lead to this belief.

● **Waterproof Paper Disposal**—The Justice Department (Anti-trust Division), is studying a request by the paper industry to permit an "orderly" disposal through normal trade channels of an estimated war surplus of 125,000 tons of waterproof papers.

This is in line with the possibility that the Anti-trust Division may take action on almost any one of the trade practices which have grown up as a result of the war.

● **Lead**—Chief beneficiaries of the 9,500 ton increase in fourth-quarter lead allocations over the 256,000 ton third-quarter total, are manufacturers of collapsible tubes and cable coverings. The lead supply for the fourth quarter is based upon estimates of 125,000 tons of primary lead production, secondary lead production (from scrap) of 73,000 tons, and lead imports of 46,000 tons.

● **Zinc**—Government stockpiles of zinc metals, which approximate 187,000 tons, will be available in part to supply deficiencies in zinc production for reconversion needs during the next six months, CPA has announced.

● **Burlap**—WPB (now CPA) and OPA have terminated their public purchase program on burlap.

● **Placement**—WPB (now CPA) is still trying to place some of its specialists. Anyone who has a position for an engineer, public relations officer, chemist, college president or almost anything else in the book, should get in touch with the Industry Personnel Committee of the CPA.

● **Army Uses Multi-Wall Bags**—In connection with recent announcements that multi-wall bags have been found effective for protection during distribution of non-staple food products, it is revealed that mobile field bakery units of the Army, moving right up to combat areas, kept American troops supplied with freshly baked bread, enriched with Vitamin B-1, delivered to the front in multi-walled bread sacks.

The sacks used were 24 by 36 in., pasted type, with a 6-in. wide bottom.

The Army also used multi-wall coffee sacks, which were 18 by 6 by 46 in., sewn, open mouth style.

Both bread and coffee sacks were constructed of three layers of special multi-wall type kraft paper. Of the three walls, two were of 50-lb. base weight, and one of 60-lb. base weight—the heavier weight forming the outer layer. No asphalt laminated paper was used in the sack itself, although they were wrapped in asphalt laminated paper for shipment.

For export, the bags were bundled in bales of 100 each, weighing 90 lbs. per bale, and double wrapped in 30–30–30-asphalt laminated kraft waterproof paper, with the outer wrapping 60-lb. base weight kraft wrapping paper, rope-tied.

● **Paper and Pulp Situation Confused**—Even the various agencies within the government which deal with paper, paperboard and pulp seem to be in somewhat of a confused state as to the status of these vital packaging materials.

Says the Department of Commerce: "The demand for most grades of paper and paperboard will continue strong through the transition period with increasing supplies of paper towels, facial tissues and shopping bags, available but the shortage of newsprint will continue.

"While it is possible to look reasonably far ahead and anticipate some of the overall conditions and developments, the outlook for the next six months is difficult to analyze, but it is expected that wood pulp supplies will continue tight with a gradual easing as inventories are re-established and imports from overseas gain greater momentum. . . . It likely will be a year or more from now, when overseas pulp imports are resumed in larger volume, before a peacetime competitive pulp market in the United States is fully apparent."

Said the WPB in announcing the revocation of Wood Pulp Conservation Order M-93: "Analysis of the wood pulp supply and requirements for the fourth quarter indicates that wood pulp will be in reasonably good supply at that time and continuation of the controls beyond the end of the third quarter is not necessary." (Incidentally, the Pulp Allocation Office of WPB has ceased to exist, since all the orders it administered have been revoked.)

Meanwhile, industry is going ahead producing paper and paperboard out from under the controls over weight, size, packaging, color and other wartime restrictions imposed under the paper simplification and standardization order L-120. But even in discussing this revocation WPB hedges by saying that it doesn't necessarily mean "that the supply of paper now balances world demand, but (it) is a step toward the natural operation of production and consumption by elimination of governmental regulations.

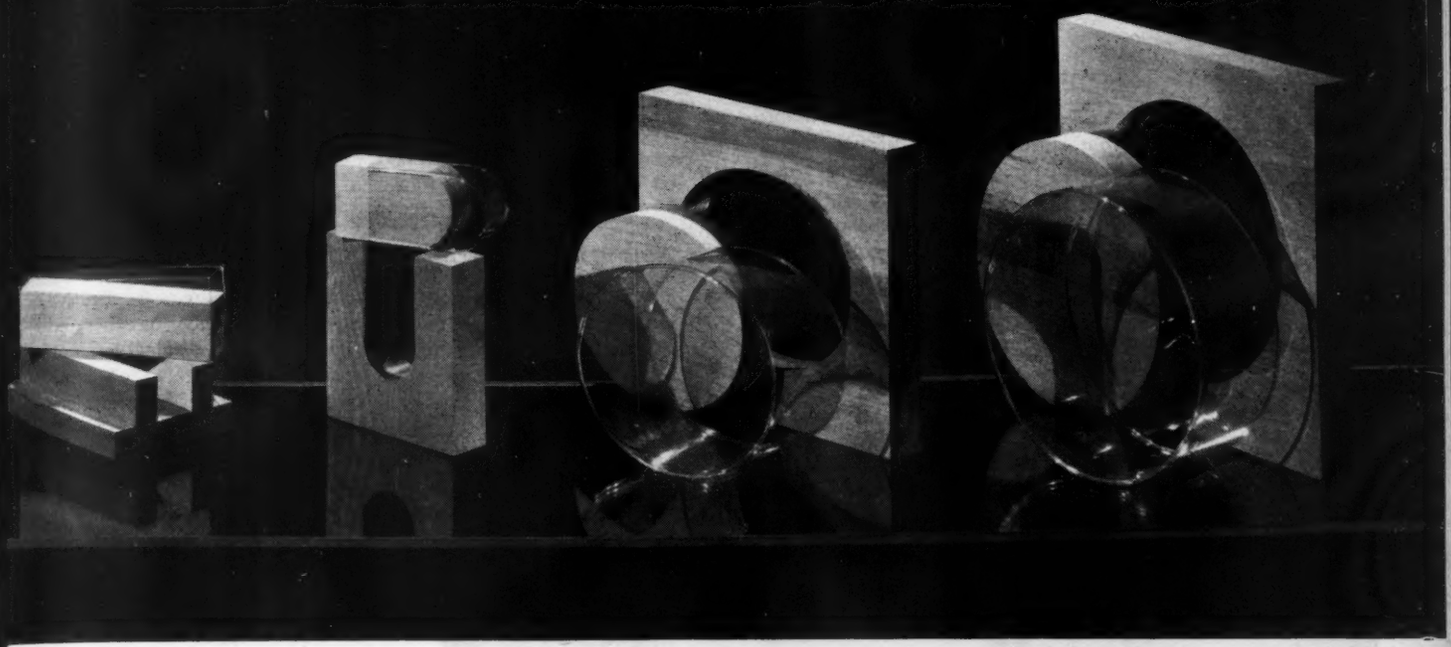
● **Huge Salvage Volume**—More than 30 million tons of waste paper have been salvaged in the United States since January 1941, according to WPB's Conservation and Salvage Division. This amount is more than 90 times the total of the nation's waste paper inventory on July 1 this year. In announcing the volume of salvage, WPB said: "Waste-paper collection and salvage are not only desirable conservation measures, but profits from the paper collected have enabled schools, playgrounds and other community organizations to purchase recreational equipment and to send gifts to military personnel overseas and men in military hospitals."

To say nothing of keeping many waste-paper-consuming mills making, among other things, packaging materials, from closing down for lack of raw material.

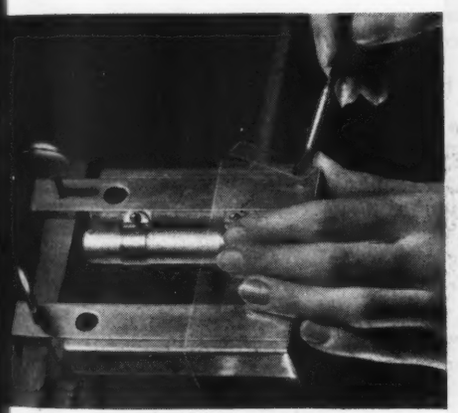
● **Looking Well Ahead**—OPA has set up a method for brewers to establish ceiling prices for beer in tin cans, but nobody knows where to get the cans.

As a matter of fact, WPB has issued a lengthy (22 pages) report, replete with charts and graphs, pointing out exactly why it is maintaining stricter control over tin than any other commodity involved in the packaging field. This country is sending tin-producing equipment to the Far East as rapidly as it can be produced, and WPB says "We anticipate receiving less tin in 1946 than in 1945 from our present wartime sources."

SEE WHAT'S COMING YOUR WAY



Wooden forms—like the "block" your hatmaker uses—make possible a variety of shapes and sizes.



Adjustable heated bars support the box as the edges are joined by quick-setting transparent adhesive.

Flat sheets become cemented cylinders. A heated mandrel—shown in use—is one of the final steps.

Eastman Acetate Sheet now available —plan "individual showcases" for your goods with the help of the Kodak Packaging Laboratory

At this Kodak "pilot operation," you and your staff are offered every opportunity to "get in on the ground floor" . . . to learn the fabrication possibilities for the package of tomorrow.

All methods of fabricating Eastman Acetate Sheet—drawing, creasing, beading, embossing—are available for study and practice. This laboratory's equipment demonstrates the fundamental principles employed in making transparent plastic containers. Kodak's technicians are right there, too —to guide and assist. Write for an appointment.

Eastman Acetate Sheet is again available. While production is catching up with demand, supplies will be somewhat limited. But you can be sure that we shall do our utmost to meet your requirements.

Cellulose Products Sales Division

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

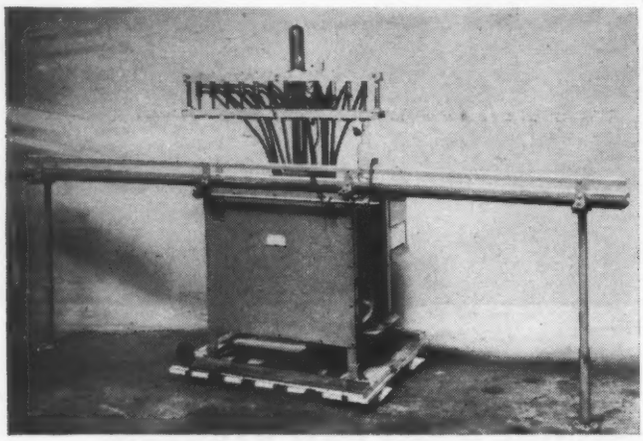
EASTMAN ACETATE SHEET

attracts . . . protects . . . sells

Equipment and Materials

VACUUM FILLING MACHINE

Scientific Filter Co., New York, recently developed a semi-automatic vacuum filling machine with a multiple adjustable head. The unusually heavy duty construction of the head permits its lowering, by means of a foot pedal, without strain while in the filling position, so that the operator's attention may center on the empty and filled bottles while those under the spouts are being filled. When the bottles are filled a foot trip is released, which immediately disengages the filling head. Simultaneously, the



automatic foam and drip control carries away any overflow that may develop. The empty bottles which have in the meantime been placed in position on the filling track are now pushed into the filling position, at the same time pushing out of the way the bottles already filled.

The filling spouts are so spaced as to make for easy changeover to larger spouts when changing from bottles to jugs. Likewise the filling head itself is easily raised and lowered to adjust it to bottles of various heights. Machine is equipped with a float tank, thus enabling it to fill from a container on the floor, or from a bottling tank above. All liquid contact parts are of stainless steel. Filling operations are speeded up since all spouts operate individually—hence no slow-filling bottles to slow up operation of the entire line. Speeds are up to 48 qts. per min. with a 12-valve arrangement, or up to 500 to 700 gal. per hr. with the large-size gallon tubes.

Machine is suitable for wines and liquors, chemicals, pharmaceutical and cosmetic products. Featured on the West Coast by Horne-Ash Machinery Co., Inc., San Francisco, who report an installation at one of the Libby, McNeill & Libby plants for brining and syruping fruits and vegetables in wide-mouth jars.

COFFEE CANS FOR CIVILIANS

Production has already started on cans for vacuum-packed coffee for civilians according to an announcement by the American Can Co., New York. Although tin plate is not yet available for coffee cans, resumption of production has been made possible by wartime research to perfect techniques of coating and soldering of black iron sheets, the company states.

FROZEN FOOD CONTAINERS

Sealright Co., Inc., Fulton, New York, has developed a new all-purpose frozen food container suitable for dry pack and syrup packed products now available to locker plant operators for resale. Filling and closing of these containers is simplicity itself—cover is removed, contents filled, and cover is replaced and the operation is complete. Containers are said to be leakproof so that brine, syrup or juice cannot escape, thus assuring positive protection against dehydration. Food flavors are not absorbed by the package nor can the package affect the flavor of the contents. Containers are sturdy and are packed in sealed dustproof bags, inside shipping cartons, that provide handy re-sale units of either 12 qts. or 24 pts. to the bag.

ADDITIONAL ETHYL CELLULOSE AVAILABLE

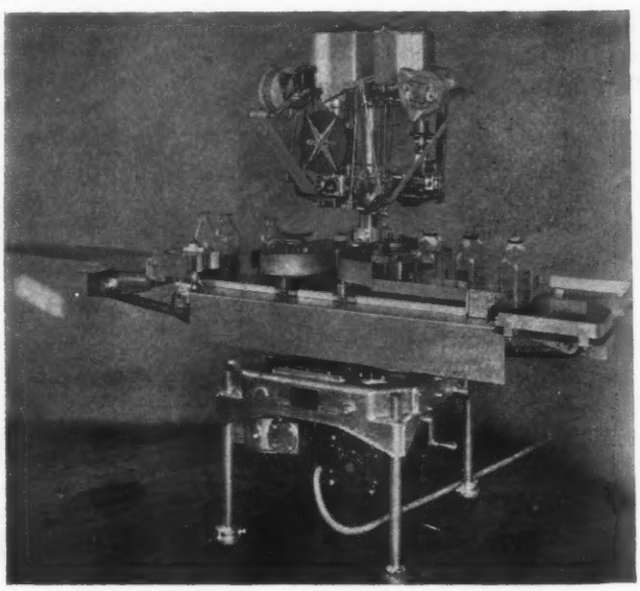
The Dow Chemical Co., Midland, Mich., announces effective immediately the availability of an increased number of types and viscosity grades of its ethyl cellulose material. Valuable as an ingredient in the manufacture of lacquers, hot melts and emulsions, the establishment of a greater number of formulations makes possible its adaptability to individual requirements.

STRIP TYPE COATING FOR CIVILIAN USE

"Dipwrap"—a hot dip protective compound—made by Paisley Products, Inc., Chicago, is now available for civilian use. This type of coating was a wartime development for the protection in shipment and storage of metal parts and tools, against corrosion and rough handling. Part to be coated is first cleaned of all grease and oil and thoroughly dried, then dipped into a tank of the melted compound manually or by some simple mechanical device. Allowed to dry for five or ten seconds, the part may then be shipped or stored. When the part is ready for use, the coating is stripped easily and completely by slitting with a sharp knife; or if the part has been dipped by means of a string, the string serves as a rip-cord to start the initial peeling.

IMPROVED BOTTLE HOODING MACHINE

Package Machinery Co., Springfield, Mass., is now producing a newly improved bottle-hooding machine that seals cellophane or parchment, printed in different colors, over the tops of both square and round milk bottles at the rate of 90 per min. Known as the BH-90, the machine incorporates a variety of mechanical improvements including a star wheel which separates the bottles as they are conveyed from a filling machine and places them in individual pockets for a feed wheel in correct timing. Other new features are the paper-feed unit and tape applicator which gives more clearance for various size bottles. Machine is easily adjusted to half-pint, pint, quart and two-quart sizes.



"THE BETTER THE PRODUCT THE MORE IMPORTANT

"JACK" IN A BOX . . .

This isn't in keeping with our usual dignified approach, but our artist insisted on the illustration—and, of course, it's true . . . there ARE extra profits and sales in . . .

INTRIGUING SET-UP BOXES
UNUSUAL MERCHANDISE-COUNTER DISPLAYS
SPECIALIZED PACKAGING
TRANSPARENT PACKAGING
CREATIVE FOLDING CARTONS

ACME PAPER BOX COMPANY

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Plants and People

On September 30 construction was started by **E. I. du Pont de Nemours & Co., Inc.**, on expanded facilities to meet steadily mounting demands for cellophane. A large addition is being made to the **Clinton, Iowa**, plant and improvements are underway at the **Spruance, Va.**, plant. **Arlington Kunsman,** formerly director of production of the rayon division, has been appointed assistant manager of the cellophane division.

Lee Hickox, who as **Chief of the Packaging Section, Office of the Quartermaster General,** was directly concerned with the Army's many subsistence packaging developments and specifications, has resigned his Washington post and is currently vacationing at his home in Prairie View, Ill. His future plans are undecided.

Continental Can Co., starting on its postwar expansion program, has announced, through its subsidiary, the **Bond Crown and Cork Co.,** the acquisition of the facilities of **Bamberger-Kraus & Co.,** Pittsburgh, manufacturers of crown caps. In addition, ground was broken recently for a new packer's can plant in **Sacramento, Calif.** The plant will provide 125,000 sq. ft. of floor space and employ between 200 and 400 men and women of all grades of skill. Also, by next year construction will begin on a large general can plant in the **Pittsburgh** area. The 900 to 1200 men and women to be employed in this plant will be drawn from the present **McKees Rocks** and **Canonsburg plants,** both of which will be closed down eventually.

Reid B. Gray has been appointed director of the **Reynolds Research Institute,** research subsidiary of the **Reynolds Metals Co.** He succeeds **Dr. Warren J. Mead** who has resigned to give more attention to his duties as head of the Geology Dept. of M.I.T. Dr. Mead, however, will remain as consultant. Mr. Gray's associates will be **J. Edward Spike,** formerly of Lever Bros. and **Carl B. Hamlin,** formerly with Armstrong Cork and Glenn L. Martin Co.

G. Fred Rieman has been appointed director of the fruit jar and domestic products division of **Ball Bros. Co.**

Frank D. Goll, formerly assistant production manager of the Cleveland works of the **Aluminum Co. of America,** has been appointed manager of the sale of products manufactured by the **Aluminum Seal Co.**

George A. Fowles, formerly manager of electric wire and cable insulating materials for the **B. F. Goodrich Chemical Co.,** has been promoted to sales manager for Geon thermoplastics. **J. H. Field, Jr.,** formerly manager of the company's service laboratory in Cleveland, is now manager of technical service for the sales staff; **M. Scott Moulton,** formerly technical service engineer for packaging materials, becomes manager of Geon coating and film materials for the paper and textile field and **Clyde D. Segner,** formerly technical service engineer in charge of fabric coatings, is the new Chicago district Geon sales representative.

Norman R. Peterson, after three years in the army where he held the rank of Captain, has returned to **The Dow Chemical Co.** to take up new duties specializing in development work on some of the newer coatings derived from **styrene** and **Saran.**

Joseph Adler has resigned as director of purchases for the **Bulova Watch Co.** to become an active partner in **Melrose Packaging** which recently purchased a plant at 525 Union Ave., Brooklyn, to manufacture a line of packaging materials, together with paper and plastic novelties.

J. Stanley Heuisler has been elected president of the **Maryland Glass Corp.** and chairman of the executive committee, while **Philip I. Heuisler, Jr.,** has been appointed executive vice-president.

The Mystik Adhesive Products division of the **Chicago Show Printing Co.,** is converting to peacetime production without a single lay-off, according to **Russell T. Leander,** president, with production channeled into peacetime markets.

William McNear Rand has been elected president of **Monsanto Chemical Co.,** succeeding **Charles Belknap,** who will serve as chairman of the company's executive committee.

Ralph H. Auch, licensed chemical engineer, after three years with WPB in a consulting capacity, has established a resident selling office to cover the Cincinnati area within 200 miles. He will handle non-competing raw material and packaging materials accounts as well as packaging machinery.

Burton L. Kassing, for the past 12 years mill superintendent of the **Hammermill Paper Co.,** Erie, Penna., has resigned to accept a professorship in the department of pulp and paper manufacture at the **New York State College of Forestry,** Syracuse University, Syracuse, N. Y. He succeeds **W. Oury Hisey** who resigned to undertake consulting work in the paper industry at Johannesburg, South Africa.

Albert W. Nygren, procurement specialist at the **Chicago Quartermaster Depot,** has joined the **Bob White organization,** Chicago to handle brokerage operations.

Robert E. Worden has joined **John I. Thompson & Co.,** as a partner in charge of management engineering services.

S. A. Bonder, is serving the drug, food, chemical and cosmetic field with packaging materials under the name of **Bonder Glass & Closure Co.,** in Brooklyn, N. Y.

Richard L. Shipley has been appointed director of sales and research for **National Casein's** eastern sales division.

Western Products, Inc., Newark, Ohio, announces the purchase of the **Burke Golf Co.** plant. Western Products, a convertor of flexible packaging materials and a manufacturer of low-pressure laminated plastics, have already moved to the new 70,000 sq. ft. plant.

A testimonial dinner tendered **S. J. Klein,** president of **Empire Box Corp.** stressed peacetime preparedness and recognized the extensive improvements in the Stroudsburg plant since its purchase four years ago.

Associated Products, Inc., Chicago, recently announced the appointment of **Richard C. Jones** as art director of the company. Formerly Mr. Jones was a package designer and promotion and display director for New York stores and cosmetic firms.

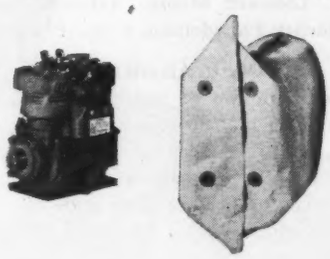
Kent Ravenscroft, recently released from the Navy, has returned as advertising manager of the **Gaylord Container Corp.,** St. Louis, Mo.

American Can Co. has announced the beginning of its expansion program with new construction at its Los Angeles plant which will double the present output of milk containers and an addition of 184,000 sq. ft. of space to the Tampa plant.

"E" Flag Awards—To the **Acme Backing Corp.** for essential packaging material used for trans- (*Continued on page 178*)

Case of the Frozen Arm

CASE NO. 823



Frozen arms—and joints and bearings too—might easily have reached epidemic proportions during the war, but for effective packaging protection. As it was, precisioned instruments, engines and assemblies traveled swiftly and surely to far-flung destinations—safely protected against rust and corrosion, ready for instant service.

Kennedy now offers comparable packaging protection to a wide variety of peacetime products—protection against dirt, dust, moisture, water, vapor, air—anything and everything which might injure or impair your product, whatever its nature.

Such product protection is increasingly important in the present peacetime era. Consumers and users demand that products reach them in factory-perfect condition. It is good business for you to heed their demand.

A notable record in designing and fabricating packages from every protective material places Kennedy in an enviable position to give your product the protection it needs. Let a Kennedy specialist help solve your problem. No obligation. Kennedy Car Liner & Bag Company, Inc., Shelbyville, Indiana.

CANADIAN PLANT: WOODSTOCK, ONTARIO • SALES OFFICES: NEW YORK, CHICAGO, CLEVELAND, DETROIT, KANSAS CITY, LOS ANGELES, ATLANTA

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PACKAGING PIONEERS
Kennedy

For Your Information

Promise of a greatly enlarged field of usefulness for the **Packaging Institute** is assured by the appointment of **Major Albin P. Dearing** as executive director. Honorably discharged from the Service, after receiving the Silver Star for gallantry in the European Theater as well as the Purple Heart, Mr. Dearing started his term of office November 1. Formerly publicity director for the Puerto Rican Government and later with **N. W. Ayer & Son, Inc.,** and the **Container Corp. of America,** Mr. Dearing comes to P. I. well equipped to do the postwar job.

Major Dearing

The Watertown Mfg. Co., Watertown, Conn., has just issued a book called **"The Watertown Book of Plastics"** which covers with charts, text and photographs the complete services offered by the company. Stock molds are cataloged and the booklet goes into some detail about facilities for making custom molds. Copies may be had by addressing the company.

"That We May Better Serve" is the title of a pamphlet issued by the **Kalamazoo Vegetable Parchment Co.** setting forth this company's plans for peacetime production. Of special interest is the section about the pulp mill which is being developed at Espanola, Ontario. Copies may be had from the company at Kalamazoo 99, Mich.

Ben Nash, product development, industrial design and market research consultant, is the author of a book called **"Developing Marketable Products and Their Packagings"** which is aimed at assuring commercial success of a new product. Mr. Nash analyzes the many and varied considerations affecting design and development which influence the marketing success of mass-production products and processes; he points out those which improve or lessen a commodity's marketability by outlining 22 elements disclosing considerations affecting development and marketing. The book demonstrates all the actual procedures in product-package development and analyzes the place of a product development executive in the business organization. Published by **McGraw-Hill Book Co.,** the price of the book is $5.00.

The annual meeting of **TAPPI** will be held during the week of **February 24, 1946,** in New York City.

Robert L. Fitts, president of the **Southern Advance Bag and Paper Co.,** was elected president of the **Paper Bag Institute, Inc.,** at a meeting held in New York City recently.

Sir William Craford & Partners Ltd., London, has criticized Britain's standard of commercial design following a survey of opinions on packaging among members of foreign embassies and legations. Representatives of 30 nations ranked British standards below those of the United States, Sweden and Switzerland. Countries as far apart as Panama and China agreed that British goods will need improved design to compete effectively with competitors in export trade.

Monsanto's plastics division has announced the formation of an application advisory group made up of 10 engineers and chemists to assist manufacturers in using plastics, entirely without charge or obligation. Known as the **Plastics Technical Council,** the group was created after a study of the information needs of manufacturers using or contemplating the use of plastic materials in their products or processes. A booklet explaining the purposes of the committee and its methods of operation is available to manufacturers from **Monsanto Chemical Co., Plastics Division,** Springfield 2, Mass.

The Diagraph-Bradley Stencil Machine Corp., recently called a **War Conference** to familiarize its distributors with the packaging and marking problems of the government and to learn the latest packaging procedure.

The National Paper Box Mfgrs. Assn. is sponsoring 22 surveys of different important industries in a series of nation-wide postwar surveys. They are carefully compiled results of thousands of questionnaires sent to business leaders, many personal interviews and the cooperation of trade associations. The surveys will be published at the rate of two a month and the first two are now ready for distribution: Survey of the **Leather Industries,** and **Textile Industries.** Further information may be had by addressing **W. Clement Moore, National Paper Box Mfgrs. Assn.,** 1504 Fidelity-Philadelphia Bldg., Philadelphia, Penna.

It is expected, according to **American Can Co.,** that the production of fibre milk containers, restrained by wartime conditions to an annual output of approximately 2 billion units, will now soar to from 3 to 5 billion by 1947. **Fred C. Baselt,** manager of the company's Atlantic division laboratories, made this prediction in a speech before the **New York State Society of Milk Sanitarians** recently, adding that a 10-billion unit goal might be attained by 1950.

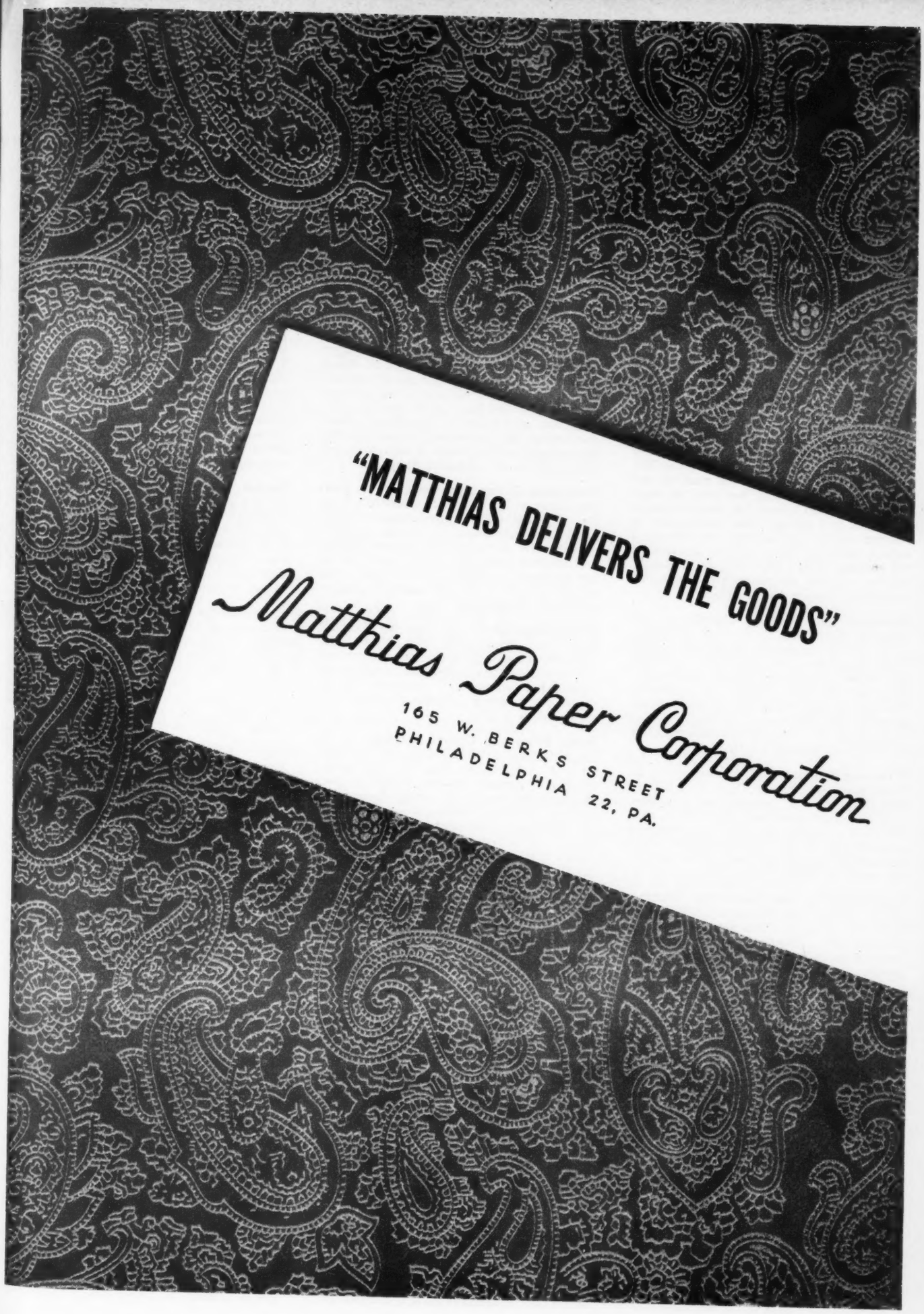
The South Wabash Engineering Co., Chicago, has published **Bulletin 124** listing all the new and used machinery and equipment the company now has for sale. Further information may be had by addressing the company, 2937 South Wabash Ave., Chicago 16.

A completely revised edition of the **Taylor** combination handbook and catalog, contains both simple and technical explanations of the meaning of pH control; specific discussions of the application of pH, chlorine and phosphate control to 35 industries; the precautions to be observed in making determinations; and descriptions of Taylor outfits, including eight new sets. Copies are free upon request to **W. A. Taylor & Co.,** 7300 York Rd., Baltimore 4, Md.

The inaugural issue of **The Aluminum Bulletin,** a publication of the **Aluminum Assn.,** made its bow recently. It is intended to serve the members of the association by presenting pertinent information both from within and outside the industry. The editorial formula decided upon as being most appropriate calls for the publication of material having specialized rather than popular interest. Present plans call for publication four times a year.

A service designed to supply industry and business with references to sources of information (*Continued on page 178*)

The spring Packaging Conference and Exposition of the American Management Association will be held April 2 to 5 in Atlantic City, N. J. The huge Convention Hall, offering 100,000 square feet of space, has been engaged for the exposition, and a complete conference program is being arranged. According to present plans, there will be no official hotel, but those attending will be asked to make their own arrangements at any of the numerous first-class hotels in the resort city.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Matthias Paper Corporation
165 W. BERKS STREET
PHILADELPHIA 22, PA.

U. S. patent digest

edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at ten cents each in currency, money order or certified check; postage stamps are not accepted.

Container Filling System, W. McK. Martin (to American Can Co., New York, N. Y.). U. S. 2,383,507, Aug. 28. A system for filling into container liquid products having a tendency to foam, comprising a filling machine from which the liquid is drawn into the containers.

Can Closing Machine, A. A. Saalbach (to American Can Co., New York, N. Y.). U. S. 2,383,513, Aug. 28. A can closing machine for sealing a flanged end to a can by reshaping of the flanged end in a seam adapted to receive a rotatable cover thereover.

Flattened Can Body Manufacturing Machine, I. D. Thornburgh (to American Can Co., New York, N. Y.). U. S. 2,383,523, Aug. 28. In a machine for making can bodies from tubing that has been flattened into double wall ribbon for convenience in shipment and storage, the combination of cutting means for severing the flattened tubing into can body lengths, and means for shaping tubing into form by means of suction cups on distributing members for engaging can body on its surface.

Apparatus for Treating Liquids, C. D. Thomas, New York, N. Y. U. S. 2,383,522, Aug. 28. An apparatus for filling and confining liquid in a container with a suitable gas under pressure comprising a filling device for partially filling the container through its opening with a predetermined amount of liquid, and a crowning device for sealing the opening of the container with a crown provided with a valve.

Wrapping Machine, C. J. Malhiot (to F. B. Redington Co., Chicago, Ill.). U. S. 2,383,664, Aug. 28. A machine for wrapping rolls of wound material comprising a continuously operating conveyer for conveying said wound rolls to be wrapped to a predetermined location, and means for rewinding unwound parts.

Ampoule Filling and Conveying Machine. W. T. Barker, Mt. Vernon, N. Y. U. S. 2,383,700, Aug. 28. Machine which automatically fills ampoules in vertical position by rotation of feed screws, and means responsive to the absence of ampoules in said feed screws to stop automatically the operation of filling means.

Container, J. Leshin, New York, N. Y. U. S. 2,383,726, Aug. 28. A container comprising a casing, a revoluble base member carried by said casing; a commodity carrier with said casing; a resilient guide member spaced from said commodity carrier and slidably and frictionally contacting the inner wall of the casing, and adapted to be retained from revoluble movement during the longitudinal movement of said commodity carrier.

Package, J. W. Little (to Sylvania Industrial Corp., Fredericksburg, Va.). U. S. 2,383,728, Aug. 28. A package having a wrapper extending about the package and formed of a plasticized non-fibrous material and a separate unattached tear-strip beneath the wrapper and extending about the package with an end of the strip projecting beyond an outer edge of the wrapper.

Closure Member, J. E. Sharp (to Aluminum Co. of America, Pittsburgh, Pa.). U. S. 2,383,747, Aug. 28. A one piece closure member adapted to secure and hold a cover upon a container, comprising a top portion and a flange portion depending therefrom to form a circular skirt.

Cover for Paper Containers, C. Barbieri (to Dixie Cup Co., a corporation of Delaware). U. S. 2,383,760, Aug. 28. A paper container having an outwardly and downwardly turned marginal portion around the mouth end to provide a depending flange spaced from the body wall and a paper cover for said container including a body portion having a depending flange extending therearound which flange is approximately the length of the container flange.

Receptacle Filling Apparatus, M. A. Benton, Liberty, N. Y. U. S. 2,383,761, Aug. 28. A receptacle filling apparatus comprising a scale including a depressible platform operable by a receptacle placed thereon and further including a beam operable by the platform, a supply line for connection with receptacle, a shut-off valve, and other accessory equipment.

Drink Dispenser, T. B. Chace (to The Dole Valve Co., Chicago, Ill.). U. S. 2,383,771, Aug. 28. In a dispenser device for producing carbonated beverages from a mixture of carbonated water and flavoring syrup, means for insuring a uniform quantity of syrup for each drink.

Bottle Filler and Capper Machine, R. F. Dorrell (50% to W. C. Dvorak, Chicago, Ill.). U. S. 2,383,781, Aug. 28. In a bottle filling and capping machine, a path for bottle travel, hydraulically actuated means to move a series of bottles along said path simultaneously and in a step-by-step progression with hydraulically actuated means to lift bottles in said series into operative relationship with filling and capping means.

Bag Forming Machine, S. H. Berch (to The Flexible Vacuum Container Corp., Los Angeles, Calif.). U. S. 2,383,842, Aug. 28. In a bag forming machine, a guide standard, comprising a base member, a straight rod pivotally mounted thereto to swing in plane normal to a web to be guided, means for adjustably setting said rod in various angular positions relative to the base, and a finger guide on rod for forming slit-like guide throat through which a flat sheet of material may be drawn.

Container, R. Guyer (to Waldorf Paper Products Co., St. Paul, Minn.). U. S. 2,383,853, Aug. 28. A container comprising two main parts, one of said parts comprising rectangularly arranged side walls, an open bottom, and a top cover; the other of said parts comprising rectangularly arranged side walls, an open top and a bottom, side walls of one part enclosing side walls of other part.

Apparatus for Displacing Air from Filled Container Head Spaces, A. L. Kronquest (to Continental Can Co., New York N. Y.). U. S. 2,383,975, Sept. 4. In a machine of this type, means for feeding open liquid filled containers along a straight line, gas delivering elements, means for suppying gas to said elements, and means for moving said chain means through a definite path effective to cause said elements to move down into gassing relation in the head spaced in the containers.

Adhesive Applying System, T. A. Federwitz & G. Grotewold (to Stokes & Smith Co., Philadelphia, Pa.). U. S. 2,384,021, Sept. 4. Apparatus for applying tabs to wrappers and means for feeding wrappers to a tabbing station.

End Seam for Metal Containers, F. J. O'Brien (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,384,042, Sept. 4. A double seam structure for jointing a closure end to a container body comprising a body wall flange.

Cap Feeding Apparatus, R. J. Stewart & J. S. Bartley (to Crown Cork & Seal Co., Baltimore, Md.). U. S. 2,384,052, Sept. 4. Cap feeding apparatus comprising means providing a bottom support for a stack of caps, a reciprocable blade at one side of said stack and movable between a position outside of stack to a laterally inserted position in the stack just above the lowermost cap to displace upwardly and support caps above said lowermost cap.

Carton, J. W. Cox (to Self-Locking Carton Co., Chicago, Ill.). U. S. 2,384,076, Sept. 4. A cellular carton comprising a pair of body blanks each creased and bent on parallel longitudinal fold lines to form a relatively narrow partition panel equipped with slots traversing entire width of the bottom to form locking means.

Container for Corrosive Liquids and Other Substances, D. T. Downes (to Pittsburgh Plate Glass Co., Allegheny County, Pa.). U. S. 2,384,084, Sept. 4. A glass container for corrosive liquids comprising plates of glass set up in angular relation with respect to each other to form the side wall of the containers, said plates having contiguous edges beveled to provide inwardly flared crevices.

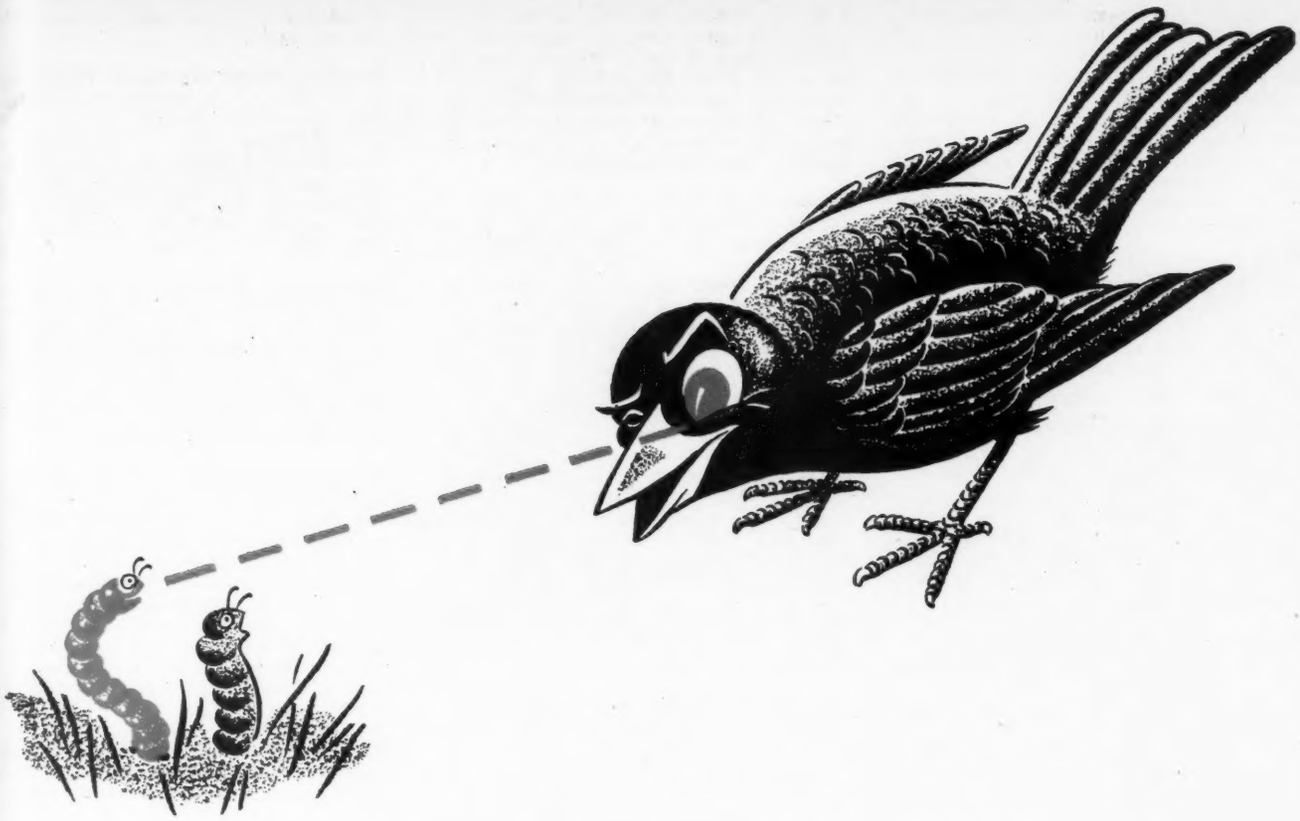
Container for Corrosive Substances, P. E. Knudsen (to Pittsburgh Plate Glass Co.). U. S. 2,384,099, Sept. 4. A container for corrosive substances comprising narrow plates of glass laid up flat in face to face contact to provide side walls being bonded together at their contiguous faces by means of a corrosion resistant cement.

Method of Assembling Dispensing Devices, A. E. Vaughn, Orange, N. J. U. S. 2,384,219, Sept. 4. A method of making a dispensing device including the steps of forming a first member including a ring element having a porous top sheet, the margin of which is secured to the inner wall of the ring element.

Apparatus for Applying Sheet Material to Other Materials, A. P. Bamford (to Arkell & Smiths, Inc., Canajoharie, N. Y.). U. S. 2,384,231, Sept. 4. Apparatus for applying individual sheets of material to moving base material comprising an applicator, and means for feeding individual sheets of material to said applicator.

Printing Ink, C. A. Carlont (to J. M. Huber Corp., Borger, Texas). U. S. 2,384,236, Sept. 4. A printing ink comprising a news ink vehicle having incorporated therein ground compacted carbon black having an apparent density of not more than 14 lbs. per cu. ft.

Automatic Scale, H. G. Allen (to Consolidated Packaging Machinery Corp., Buffalo, N. Y.). U. S. 2,384,228, Sept. 4. An automatic weighing device equipped



EYE APPEAL

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Colorful Palm Brothers Decals command such attention — give you the product identification you desire.

Regardless of surface, Palm Brothers Decals are easily applied. Magnetic in color, economical in price, remarkable in durability, they are your marks of distinction . . . exclusively yours.

Palm Brothers Decals spell the difference between dynamic product identification and mediocrity.

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THE PALM BROTHERS Decalcomania Co.

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for supplying a stream of material to be weighed.

Jar Fastener, C. H. Judd (to Tinnerman Products, Inc., Cleveland, Ohio). U. S. 2,384,310, Sept. 4. For a receptacle with cover, a clip of a single piece of resilient sheet material having an abrupt projection adjacent its lower end underhanging the shoulder of receptacle anchoring the clip thereto.

Bottle Carrier, E. H. Lupton (to The Bartgis Bros. Co., a corporation of Maryland). U. S. 2,384,480, Sept. 11. A container of cardboard for carrying plural rows of bottles formed from a single quasi-rectangular sheet of material scored longitudinally along spaced lines.

Method and Apparatus for Packaging, E. J. Recechini (to Schutter Candy Co., Chicago, Ill.). U. S. 2,384,492, Sept. 11. An apparatus for packaging articles, the combination of, means for plating a continuous strip of packaging material into a plurality of grooves spaced laterally and extending lengthwise for inserting articles in continuous strips.

Collapsible Box Structure, F. V. Powell (to Lindley Box & Paper Co., Marion, Ind.). U. S. 2,384,559, Sept. 11. A rectangular collapsible box including four sequentially connected walls, a bottom flap of box area hinged to one wall, a triangular bottom flap hinged to an immediately adjacent wall and lapping and re-enforcing the bottom flap.

Article Assembling Apparatus, E. E. Meilstrup (to Western Electric Co., New York, N. Y.). U. S. 2,384,560, Sept. 11. An apparatus for assembling a relatively flexible sheet on a number, a flexible camming element, a plurality of plungers by said camming element to fold the flexible sheet into engagement with a surface of the in member.

Handle for Containers, L. S. Witherspoon, Los Angeles, Calif. U. S. 2,384,718, Sept. 11. A substantially U-shaped handle for containers and the like comprising a grip portion and connected extensions.

Capping Apparatus, J. J. Kittess, Los Angeles, Calif. U. S. 2,385,004, Sept. 18. A bottle cap feeding apparatus including support and hopper on said support.

Bottle Closure, N. P. Steckler, New York, N. Y. U. S. 2,385,114, Sept. 18. In a double closure for bottles having necks of varying dimensions an inner closure sheet adapted to cover the bottle's mouth, and an outer closure strip guided about the bottle.

Method and Apparatus for Producing Bags, W. S. Patterson (to Pneumatic Scale Corp., Ltd., Quincy, Mass.). U. S. 2,385,229, Sept. 18. The method of making and filling bags by means of feeding a web of bag forming material an amount in excess of that required for one bag length to form a relatively slack portion.

Packaging Machine, G. A. Robinson (to Pneumatic Scale Corp., Ltd., Quincy, Mass.). U. S. 2,385,233, Sept. 18. An automatic weighing machine operating in cycles with volumetric bulk load forming means.

Bag Closure, C. V. Brady (to Bemis Bro. Bag Co., St. Louis, Mo.). U. S. 2,385,255, Sept. 18. In a bag, a cord stitched to the outside of the bag and spaced from the end of the material forming the bag, and being substantially parallel to said end.

Loading Device, W. Strauss (to F. J. Stokes Machine Co., a corporation of Pennsylvania). U. S. 2,385,311, Sept. 18. A loading device for preforms comprising in combination, a horizontal feeding tray, a plurality of storage tubes and a storage hopper for preforms having an outlet opening of a relatively small area.

Container, A. Calleson & E. A. Calleson (to Crown Cork & Seal Co., Inc., Baltimore, Ohio). U. S. 2,384,810, Sept. 18.

Attached Filler Cap, R. E. Larson, St. Paul, Minn. U. S. 2,385,364, Sept. 25. The combination with a filler tube and a cap therefor, said cap having a hinge lug at its central portion and said tube at one side is formed with spaced hinge lugs, of a duplex V-shaped spring formed from a single piece of wire.

Dry-Cell Dispensing Device, L. G. Briggs (to Ray-O-Vac Co., a corporation of Wisconsin). U. S. 2,385,400, Sept. 25. A dry-cell dispensing device comprising a box formed of front and rear panels connected by top and bottom walls and end walls, said box being of a size to hold a plurality of dry-cells in superposed parallel relation with the ends of the dry-cells adjacent to said end walls.

Egg Carton Setting Up Device, K. T. Buttery (to Sutherland Paper Co., Kalamazoo, Mich.). U. S. 2,385,401, Sept. 25. A cellular carton comprising upwardly diverging walls, a longitudinal partition, outwardly inclined bottom wall members having slots therein and transverse partition members hingedly connected to said side walls.

Sealing Machine, J. E. Underwood (to Aluminum Co. of America, Pittsburgh, Pa.). U. S. 2,385,429, Sept. 25. In a sealing head for securing skirted closures on the mouth of a container, a pressure plate mechanism for pressing said plate against closure seated on a container.

Safety Liquid Dispenser, A. T. Harris, Bakersfield, Calif. U. S. 2,385,509, Sept. 25. In a device comprising a bottle body having a tapered bottle neck at its top end and a reduced bottom end; a valve seat ring integral with the lower end of said tapered bottle neck, said valve seat ring having shoulders and being provided with an opening that permits ingress and outgress of liquid when regulated by a valve.

Package, H. J. Osterhof & La V. E. Cheyney (to Wingfoot Corp., Akron, Ohio). U. S. 2,385,531, 2,385,532, 2,385,533, 2,385,534 & 2,385,535. These five patents relate to an oil package for lubricating oil which consists of a rubber hydrochloride film plasticized made into a bag.

Clasping Device for Bags, Portfolios, Envelopes, and the Like, J. I. L. Israel, Rio de Janeiro, Brazil. U. S. 2,385,576, Sept. 25. In combination with a container having a flat front face, a flat closing flap when folded over said front face in contact with same, at least two open hooks secured spaced apart, with two holes in said flap corresponding to said hooks, and equipped with elastic strip secured to both ends which engages said hooks when in closed lapped position.

Machine for Sealing Waxed Paper Bags, A. B. McLauchlan, Salem, Oregon. U. S. 2,385,583, Sept. 25. A machine for heat-sealing waxed paper bags including a pair of top and bottom plates, and a pair of heating pressing rollers mounted on vertical shafts.

Handle Defining Closure for Paper Bags, H. G. Allen (to Consolidated Packaging Machinery Corp., Buffalo, N. Y.). U. S. 2,385,597, Sept. 25. A handle-defining closure for paper bags and the like, including a collapsed bag mouth having an upstanding portion, reinforcing folds disposed on each side of said upstanding portion of the collapsed bag mouth.

Bag Closing Machine, H. G. Allen (to Consolidated Packaging Machinery Corp., Buffalo, N. Y.). U. S. 2,385,598, Sept. 25. In a machine having a plurality of stations successively operable to form a closure upon a filled paper bag, the side walls of which have been tucked inwardly above the level of the contents.

Dispensing Container, A. P. Banua, Kalaheo, Territory of Hawaii. U. S. 2,385,600, Sept. 25. A dispensing container formed with an interiorly located tube in its lower end constituting an outlet for the container and the wall of the tube provided with openings communicating with the interior of the container, a second tube mounted with the first tube and projecting out from the bottom of the container, this being rotatable with respect to the first tube.

Machine for Producing Containers and Parts Thereof, C. T. Brewer (to Dixie Cup Co., a corporation of Delaware). U. S. 2,385,604, Sept. 25. In a machine for producing containers, a forming mechanism comprehending, in combination a backing cone and a rotary forming cone, the cones being practically tangentially disposed with the apex of the forming cone disposed slightly off radial position from the apex of the backing cone.

Inks, A. B. Davis (to A. B. Dick Co., Chicago, Ill). U. S. 2,385,613, Sept. 25. A duplicating ink characterized by the property of rapid drying upon application to an impressing sheet.

Bag, G. W. Poppe (to Equitable Paper Bag Co., Inc., Long Island City, N. Y.). U. S. 2,385,647, Sept. 25. A bag consisting of a bellows fold tube having a front and back wall, said bellows folds and one of said wall being formed at the top edge with corresponding recess exposing a portion of inner surface of the remaining wall.

Double Container, M. Prager, Irvington, N. J. U. S. 2,385,648, Sept. 25. A double container comprising a main bottle having an externally screw threaded neck portion, a cap having a screw threaded flange fitting over said neck portion and a small bottle suspended by the neck in the large bottle.

Tucking and Folding, Mechanism for Wrapping Machines, C. Areit (American Machine and Foundry Co., a corporation of New Jersey). U. S. 2,385,675, Sept. 25. In a wrapping machine, a lifter table constructed and barred to receive partially wrapped articles, and equipped with tuckers which move into folding engagement with projecting wrapper to form end tucks.

Package Sealing Strip Applying Mechanism, L. V. Whipple & S. W. Pollace (to American Machine and Foundry Co., a corporation of New Jersey). U. S. 2,385,751, Sept. 25. In a strip sealing mechanism, a package runway provided with a strip sealing station, and means for moving packages to be sealed through said runway and to said station.

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On the counter . . . on the self-service rack, printed transparent wraps displaying your product in flattering perspective saves time, speeds sales, and tells the story the salesman used to tell — at a glance.

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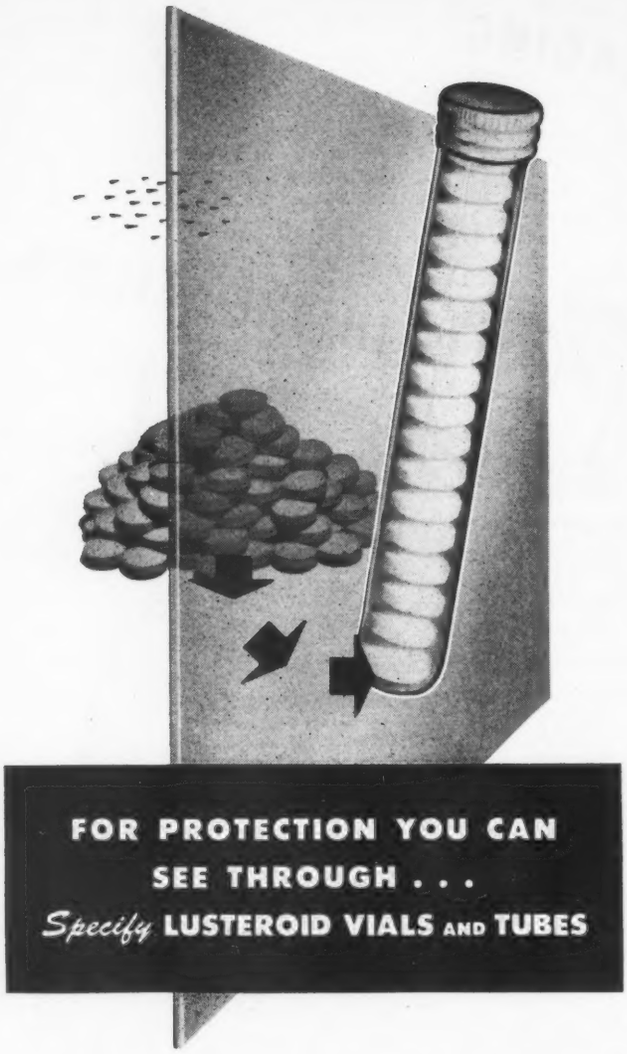

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Export conference . . .

(*Continued from page 126*) pack other than as a corrosion preventive. Dr. Waring noted that mold growth is as big a factor in deterioration as corrosion. Fabrics deteriorate in high humidity or liquid water and he predicted that many items containing fabric will be packed by Method II. Caskets lined with fabric are currently being shipped overseas protected by Method II pack. Two instances of pharmaceutical use of Method II packaging were cited by Dr. Waring: (1) narcotic drugs (morphine and codein) in tablet form, which disintegrate in the presence of moisture; (2) gelatine capsules (vitamins), which soften in the presence of moisture. He also called attention to the possible use of Method II for packaging silverware and the luxury-jewelry lines to prevent tarnishing.

G. E. McCorison

Speaking on waterproof papers as a protection to America's world-wide trade, Mr. McCorison stated that waterproof duplex paper will undoubtedly be used to protect the large world-wide shipments that may be anticipated by industry. Before the war, inadequate protection offered by waterproof papers for overseas shipments was attributable to the tendency to use minimum grades of paper and economical methods of packing. War developments proved this was a false economy. Improvements in the application of waterproof papers began with the first damage reports from overseas. A significant result of the battle to protect supplies was the development of special types of waterproof papers to do specific jobs of protection. Of equal importance was the improvement made in the proper application of waterproof papers.

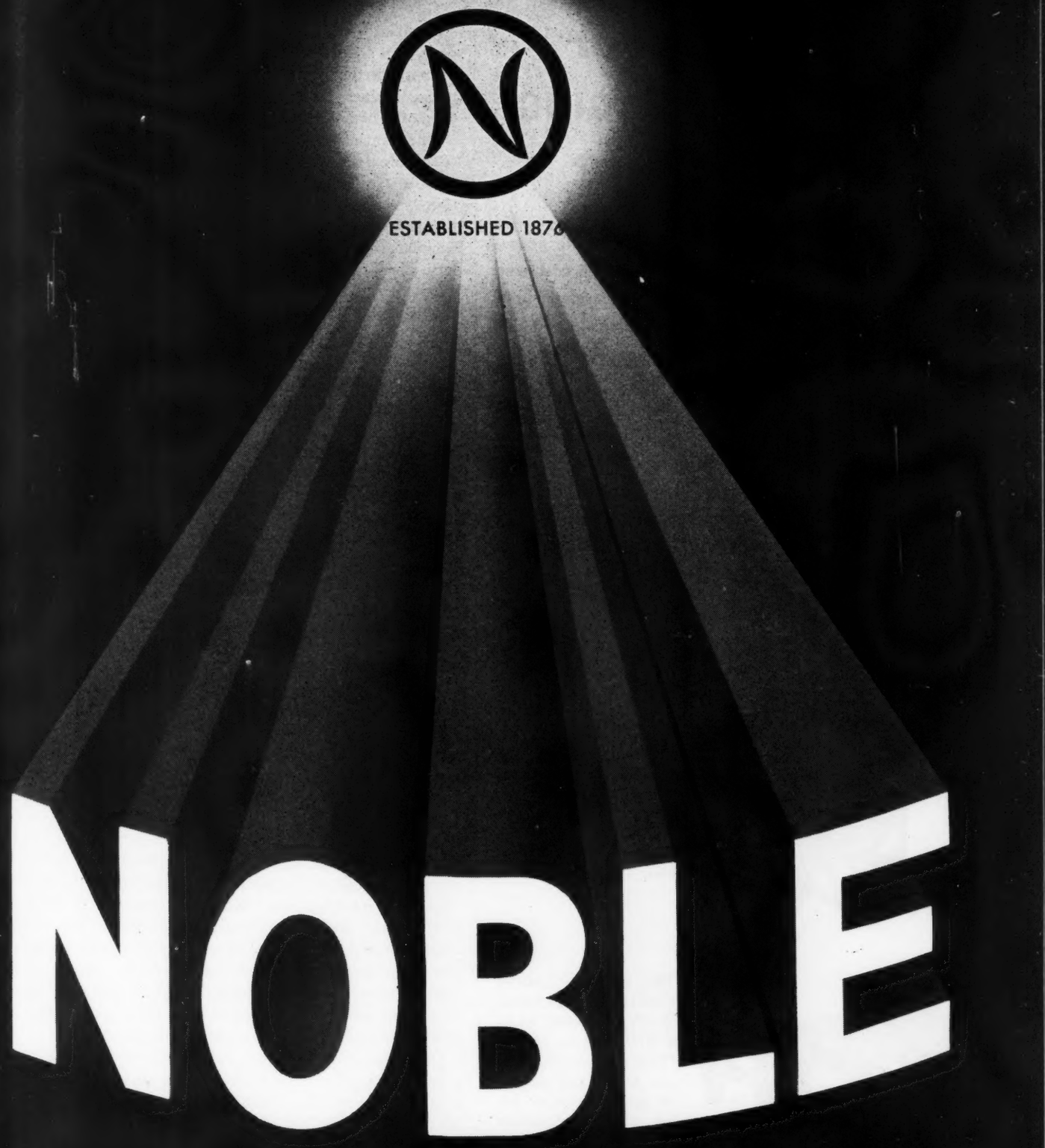
The specific waterproof papers and packing methods developed during the war which will continue in use commercially are not yet determined, but it is expected that all will be used to some extent. In addition, there may be further specialization to do certain jobs better or cheaper. Careful engineering is necessary, however, if the military standards developed during the war are to be modified. Packing and packaging research must be placed on as high a level as product development if America is to continue in world trade.

While there are no estimates of the tremendous loss of repeat sales for American products overseas due to corrosion damage, Mr. McCorison said, it is known that Marine insurance rates and claims in the future will be greatly affected by packaging. He noted that Marine Underwriting Standards "favor export packaging requirements as established in military overseas shipping."

J. D. Malcolmson

The V-board shipping containers developed during the war as a substitute for wood boxes represent a pooling of all the technical knowledge of the fibre container industry with complete elimination of competitive aspects, Mr. Malcolmson stated. Many people have the erroneous impression that a V-box will keep water away from the contents, while actually the designation simply means that this box will not disintegrate on immersion in water. If water is to be kept away from the contents, some additional waterproofing application is necessary.

There is no doubt but that the standard military V-box is too expensive for ordinary commercial use, but it seems logical that the fibre container industry will soon have available



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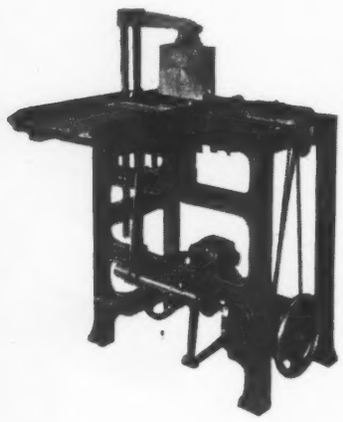
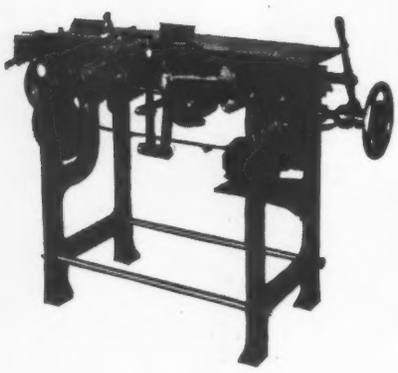


This PETERS JUNIOR CARTON FORMING AND LINING MACHINE sets up 35–40 "Peters Style" cartons per minute and requires only one operator. After the cartons are set up they drop onto a conveyor belt where they are carried to be filled. Can be made adjustable to set up several size cartons.



This PETERS JUNIOR CARTON FOLDING AND CLOSING MACHINE closes 35–40 "Peters Style" cartons per minute and requires no operator. After being filled, the cartons enter this machine as open, filled cartons and leave machine completely closed, ready to be packed for shipment or wrapped. Can also be made adjustable to close several size cartons.

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a modified V-board, less expensive, yet sufficiently strong to cope with postwar export shipping requirements. Mr. Malcolmson predicted greater general acceptance of fibre shipping containers for export in view of the exceptional performance of V-boxes observed during the war.

The great need for adoption of uniform specifications by all steamship lines, following the pattern of uniformity set up for railroads by Rule 41 of the Consolidated Freight Classification, was suggested by Mr. Malcolmson. The present situation is unsatisfactory for both shippers and carriers, and "the time has come for all of the steamship lines to agree on uniform specifications for export fibre containers."

Henry A. Wolsdorf

An analysis of the conditions to which overseas shipments are subjected as reported by Mr. Wolsdorf indicated that shipments in commercial export may be expected to encounter only slightly less severe hazards that tend to cause physical and corrosion damage to contents than those encountered by military overseas shipments. He recommended, therefore, that "the general specifications as given in the latest issues of JAN specifications be used for all commercial export shipments subjected to present normal conditions of handling, transportation and storage." In this recommendation, Mr. Wolsdorf is supported by the packing engineers of the majority of the large manufacturing organizations.

The relationship of the nature of contents to the required strength of the box was discussed by Mr. Wolsdorf. Contents in shipping boxes have been classified into three types of loads and the successful performance of wooden shipping containers depends greatly on proper classification and application of the type of load in the box. This calls for careful study of contents and correct design of supports, filler pieces, etc., so as to dissipate forces acting on the box in such manner that the vulnerable parts of the box or contents will be given adequate protection.

Little attention was given in the past to providing protection against corrosion to contents in the design of wooden shipping containers, but the armed services found this to be an important consideration. When the container is small, the box designer does not have a difficult problem; with large cases, the problem is more complicated since the application of a sealed case liner becomes impracticable. The important thing to remember in overcoming the problem is the necessity to provide adequate ventilation to permit only a minimum amount of condensation to occur inside the crate.

QUESTION: Costs of electrical machinery in foreign countries is always from 25 to 40% higher, and experience shows that from 15 to 25% must be added to the selling price if Method I or Method II packaging is used. Will foreign customers be willing to pay this additional amount for added protection?

MR. LEE: The added cost will be offset by the cost of scrapping and the need for replacement parts. Efforts are being made to decrease packaging costs and it is believed that by changeover from military practices and by technical developments packaging costs will range between $1/2$ and 5% of product cost.

QUESTION: Should all wooden boxes for export be strapped?

MR. WOLSDORF: Yes, definitely.

QUESTION: Can palletizing of loads in peacetime be expected?

MR. WOLSDORF: No widespread use of palletized loads for export may be expected for some time.

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With Dewalco Waterproof Cements, developed to meet special wartime needs, packers for peacetime are already finding new ways of doing old jobs better. Where a fast-acting, flexible, waterproof bond on hard-to-seal boards and papers is a necessity, these waterproof cements are solving many problems. And now that restrictions on materials are rapidly lifting, new formulations are on the way, with still wider uses—and at attractive prices.

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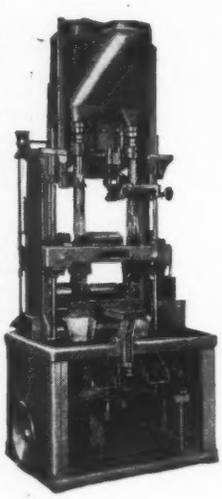

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Produce by air . . .

(*Continued from page 100*) handling and packaging is adopted as it comes to light. Mr. Myers is insistent on doing away with middlemen altogether and selling his produce direct to retailers—both for the saving in markup and the very important saving in time and handling.

Most important of all to this new type of merchandising, however, will be a reduction in air cargo charges. Handicapped at present on one hand by high freight rates and on the other by low OPA ceiling prices, Mr. Myers concedes that the business he has pioneered is not too attractive profitwise. However, he looks forward to the day when air freight rates, which now average 26½ cents per ton mile, will be cut to 10 cents or even to 5 cents. With increasing volume of air produce shipments and with more economical planes such as the Conestoga, he believes—and is gambling—that this day will come.

When the day does, he is convinced, practically all quality produce grown in California will be shipped to the Middle West, East and Southeast by plane—and sold at a retail price little higher than presently charged for 15-day-old stuff transported by rail.

Although by pre-cooling he has completely eliminated the use of ice in shipment—which has handicapped many other air produce trials through the weight and litter it creates—Mr. Myers has had only one serious spoilage loss, resulting after bad weather grounded a plane in August heat. The packaging has been aimed entirely at preservation of the produce in the retail store itself, preventing the handling which destroys appearance—although as pointed out above there are important packaging considerations which will effectively precool and then retain low-temperature during transit, without condensation.

At the moment, Mr. Meyers is well satisfied with his packaging generally, and since the 1-lb. window carton has worked out so well, there are no changes anticipated in the immediate future.

Now that materials are more readily available, however, it is possible that waxed fibreboard will be used in the carton, and it is also likely that de luxe gift packages of acetate will be developed for the special gift trade. Mr. Myers is deadly serious about making air-borne produce a stiff competitor for frozen foods, and he sees in packaging and aviation the real means of doing so.

"In the future," says Mr. Myers, "we expect that the fruit and produce industry will be forced to use individual packaging for every product, both to compete with frozen foods and to prevent the universal handling of fresh green goods and fruit displayed in open bins in the average retail store. I feel that handsome, practical packages for all such foodstuffs will go a long way toward building up their sale, and that all heads of lettuce, cauliflower heads, tomatoes, etc., will eventually appear in small unit packages whether shipped by rail or shipped by air."

CREDITS: *One-lb. window cartons by Bemiss-Jason Co., San Francisco, and The Container Co., division of Continental Can Co., Inc., Van Wert, O. Fibreboard shipping containers by Fibreboard Products, Inc., San Francisco, and Kieckhefer Container Co., San Francisco. Wirebound veneer crates by California Barrel Co., Ltd., San Francisco, and Timber Products Co., Medford, Ore. Cellulose acetate film by Celanese Plastics Corp., New York. Cellophane by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., and Sylvania Industrial Corp., New York.*

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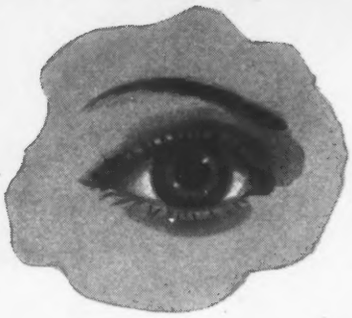
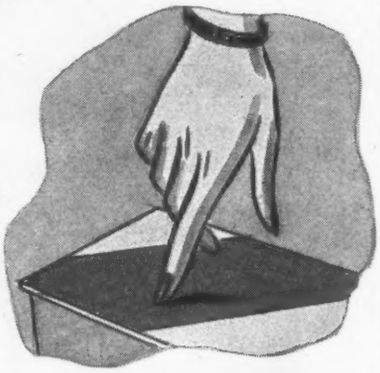


Eye Appeal

Touch Appeal



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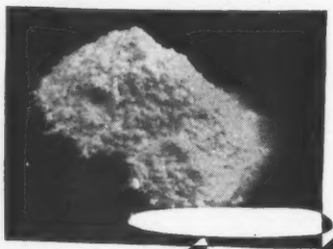

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Sublimation . . .

(*Continued from page 135*) within the stem of the all-glass flame-sealed ampoule. Various other types of container have been devised for this purpose, and some of these are illustrated in Fig. 3.

The manner in which the increase in moisture resulting from storage in rubber-stoppered vials is reflected in loss of potency is illustrated in Table I. With products less stable than diphtherial antitoxin, the effect shown is even more marked.

Humidity "uncontrolled" is that resulting from warming of the air in ordinary incubators at 38 deg. and 45 deg. C., under the usual seasonal conditions near Philadelphia. The contrast obtained in the results from relative humidity maintained at 100% is striking. By contrast, the degree of stability which is obtained with the use of all-glass containers, or any other container which is vaporproof, is made evident from the data in Table II.

TABLE II.—LOSS IN POTENCY OF DIPHTHERIAL ANTITOXIN HORSE SERUM

Effect of initial content of moisture; stored in 37 C.—All-glass containers

	Initial moisture	*Potency, units per ml.*				
		Initial	6 *Weeks*	6 *Months*	18 *Months*	3 *Years*
Liquid	. . .	550	550	45	0	. . .
Dry	0.5%	550	550	550	550	450
Dry	5 to 8%	550	45	Insoluble	. . . .	. . .

These data also reveal the importance of the initial low content of moisture.

References

1. E. W. Flosdorf and S. Mudd, "Procedure and Apparatus for Preservation in 'Lyophile' Form of Serum and Other Biological Substances," *Journal of Immunology*, 29, 389–425 (1935).
2. E. W. Flosdorf, L. W. Hull and S. Mudd, "Drying by Sublimation," *Journal of Immunology*, 50, 21–54 (1945).

Family design . . .

(*Continued from page 103*) over. Physicians also found it more difficult to remove the contents of long bottles and vials with a hypodermic needle.

2. Skirt-type rubber stoppers were replaced with aluminum peel-off top, serum-type caps. Because bottles vary in diameter, the skirt-type stoppers sometimes became loose, providing opportunity for contamination. Awkward gadgets were needed to hold the skirt-type stoppers in place during sterilization, otherwise, increased pressure resulting from the heat, would blow the stoppers off. The aluminum cap, with its rolled-under edge, eliminated the use of special holders, made sterilization easier and thereby accelerated production of the drugs.

3. Label sizes were standardized to accord with the size of the ampule, bottle or vial, rather than to conform to the product.

4. Ampule label copy was printed so it would run parallel with the axis, or height, of the ampule, to facilitate reading. The company observed that all ampule copy in the past was

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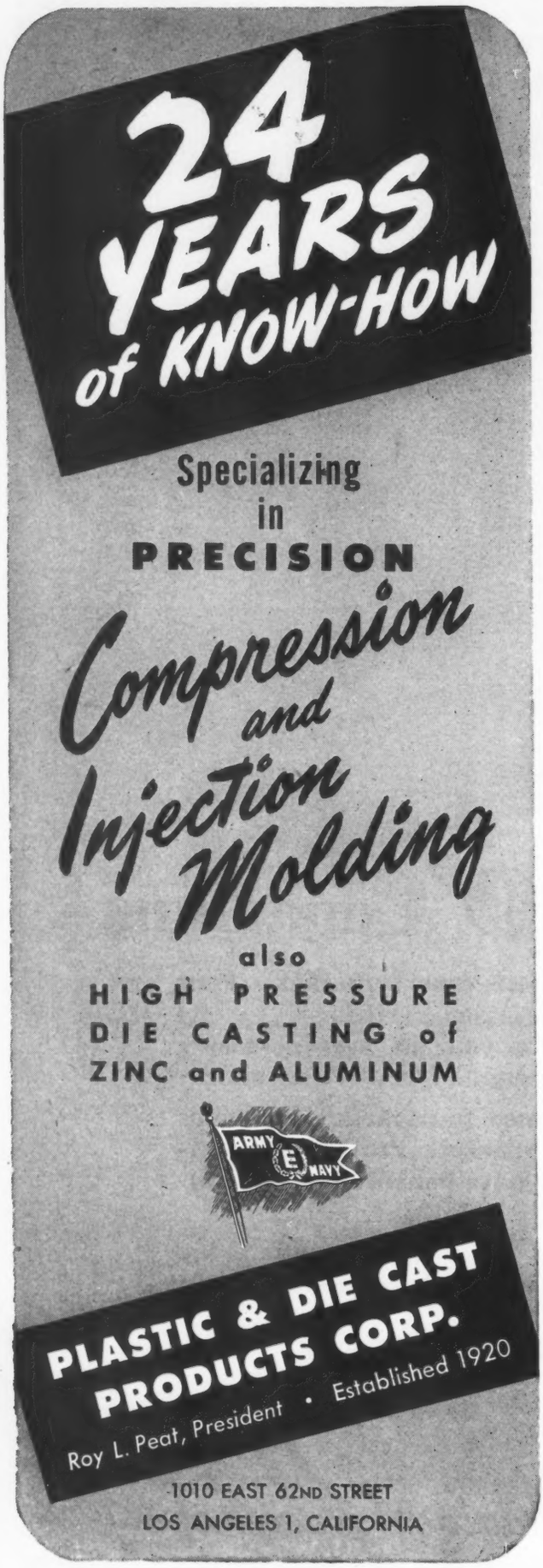
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printed around the diameter, which compelled physicians to turn the ampule to read each line of copy.

5. Cartons and labels were varnished, after multigraphers assured the company that imprinting could be done on varnished surfaces. Such surfaces give the package a better initial appearance. Surface-varnished packages gather less dust and dirt and thereby maintain good appearance.

6. Multigraph would be used for imprinting control numbers and dates, and on such other jobs as required only a small number of individual labels, cartons and containers.

7. Use of any modified form of the company's existing designs was vetoed.

8. The designer's suggestions, with some modifications, were accepted.

The Committee approved the color scheme as originally submitted. The Bernhard Modern Roman Type in which the brand name was set won favor for its distinction and style. The bold, easily readable Ultra Bodoni type for the product name also was applauded. Discussion, however, developed among committee members as to the way in which the name Bristol had been incorporated into the design, it was felt that it would make copy revision impractical. The name Bristol always would have to be included in any future revision of the electrodes or plates, thereby greatly increasing the cost of such changes. Suggestions from the Committee, therefore, enabled the designer to put the company name within the area of basic design, so that future label and copy revision would not affect this area.

In reality, the final design is the outcome of continuous close cooperation between the Bristol Laboratories Packaging Committee, the designer, the labeling-machine maker and the printing companies.

CREDITS: *Designs by Egmont Arens, New York. Cartons by Lord Baltimore Press, Baltimore. Identity marking methods by Addressograph Multigraph Corp., Euclid, Ohio. Labeling machines by New Jersey Machine Co., Hoboken, N. J.*

The fibre can . . .

(*Continued from page 125*) the production job unique. A large part of this production takes place under glass on machinery which was designed by engineers of this company and built in company machine shops.

Manufactured in a Southern pulpwood area, the paper is subjected to procedures which destroy all pathogenic bacteria. It is then wrapped and sealed before starting on its way to company plants. After being unwound from reels, trimmed and decorated, the paper is cut into blanks from which the containers are formed. The seams of the containers are sealed with a thermoplastic cement, after which they go into a glass-enclosed machine for a bath of hot paraffin which coats them inside and out. After the plug which protects the pouring lip of the can has been sealed in a sterile atmosphere, it is opened only once and then for the few seconds necessary for the filling and resealing process at the dairy. All of this filling machinery, by the way, was also designed by can company engineers and built in company machine shops.

When production of the fibre milk containers was started by Canco in 1934, approximately 5,000 units a day rolled off the lines. Dairymen soon discovered the merits of a container which could be packed in a delivery carton or case with a minimum amount of both over-all space and intermediate

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Availability

NOW

• The Watson-Standard laboratories are ready to assist in supplying you with a protective coating formulated from available materials for your specific coating requirements.

A number of critical chemicals needed by our armed forces to continue the prosecution of the war are now available for the production of top quality protective coatings, in this immediate post war period.

Your requests for detailed information will be given our prompt attention.

Rx PROTECTIVE COATINGS

THE WATSON-STANDARD CO.

Manufacturers of PAINTS • VARNISHES INDUSTRIAL FINISHES AND LITHOGRAPH COATINGS

Factory and General Office:
PITTSBURGH, PA.

WAREHOUSES:
Boston • Buffalo
Detroit • New York

air space, thus providing insulation against a rise in temperature during transportation of filled containers and so requiring less refrigeration. Consumers gave a cordial reception to the container, which, with its flat top and hinged plug closure, could be easily stored in home refrigerators and reclosed after each use.

The result was that demand rose consistently and by 1944 production was in excess of one billion units. Company officials foresee, for the postwar period, even greater popularity and use, since war restrictions on paper and equipment prevented opening of many new markets in which there was a proved demand.

Summing up the role of the fibre can as a wartime substitute and its extension into postwar packaging, we at American Can do not believe that it should be regarded as a competitor of the metal can, which will undoubtedly remain the preferred type of container for the majority of food processors. However, as a package for dry items, milk and some chemicals and cosmetics, it obviously has a future assured by its performance during the past few years. It probably is safe to say that the fibre can will hold at least 30% of its wartime gain in use.

Questions and answers

(*Continued from page 142*) tures. Water vapor under these conditions behaves as any other gas and an index of its density (wt./cu. ft.) is its molecular weight of 18. Similarly, dry air would have a density value as indicated by its molecular weight of 29. This means that vapor is $^{3}/_{5}$ as light as dry air and that mixtures of water vapor and air will be increasingly lighter than dry air as humidity content of the mixture is increased. You have no forced draft in your package testing cabinet, your packages are giving off water vapor, so the natural tendency is for water vapor to rise to the top of the cabinet since both the water vapor and dry air are at the same temperature.

You neglected to say, but it is probable that your desiccant has been placed at the bottom of your cabinet under a screen of some kind. If you are using calcium chloride the humidity immediately over the surface of the calcium chloride would be in the neighborhood of 10% R. H. and you can expect to find humidities approaching 100% at the top of the cabinet. The actual value of the humidity at the top of the cabinet would depend upon gas diffusion as well as thermal currents which would cause some mixing of the air and water vapor.

The solution of your problem is to place large trays of calcium chloride or any other desiccant at the top of the cabinet in such a way that air can circulate around them. You will find that these top trays of desiccant will absorb a great deal more moisture than the bottom trays and that with this arrangement your whole cabinet will maintain a uniformly low humidity without the necessity of a fan or blower.

Every honorably discharged veteran who has had previous packaging experience may insert, free of charge, a "position wanted" ad in the Classified Advertising Section of MODERN PACKAGING. *Address the Classified Advertising Dept.,* MODERN PACKAGING, *122 E. 42nd St., New York 17.*

FRONT AND BACK LABELING? . . . HERE'S

PNEUMATIC'S

"Lower Cost Per Container"

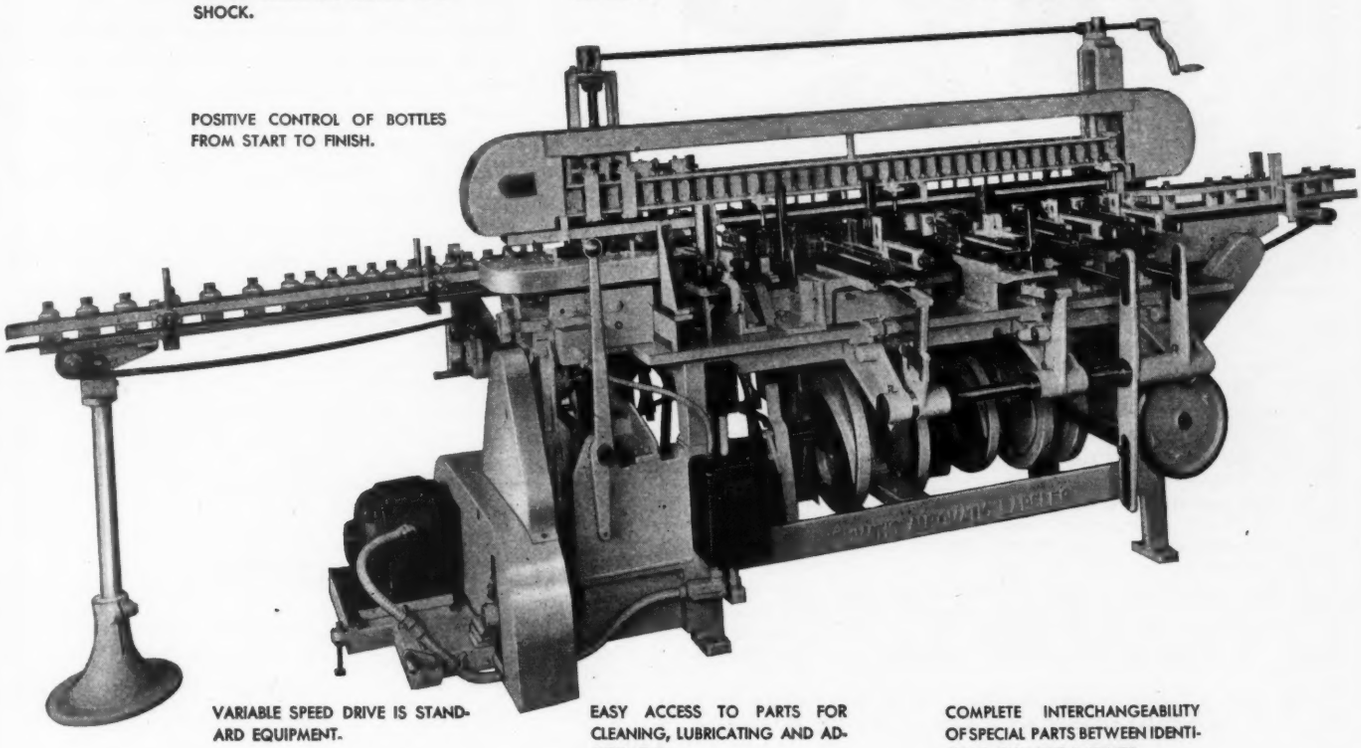
ANSWER!

CONTINUOUS STRAIGHT-THROUGH INTAKE ELIMINATES IMPACT AND SHOCK.

DIRECT TRANSFER OF LABEL TO CONTAINER.

DOUBLE PRESS STATION INSURES ALL-OVER LABEL ADHESION

POSITIVE CONTROL OF BOTTLES FROM START TO FINISH.



VARIABLE SPEED DRIVE IS STANDARD EQUIPMENT.

EASY ACCESS TO PARTS FOR CLEANING, LUBRICATING AND ADJUSTMENT.

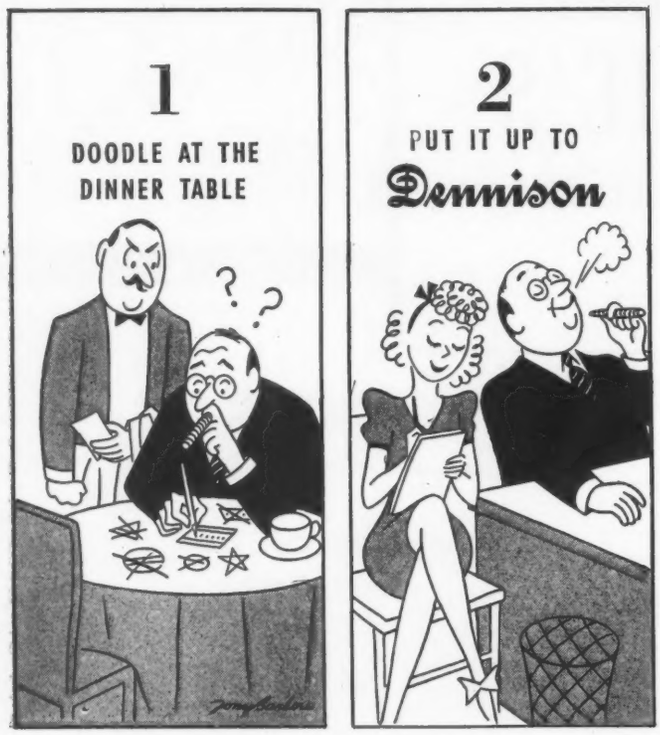
COMPLETE INTERCHANGEABILITY OF SPECIAL PARTS BETWEEN IDENTICAL PNEUMATIC LABELERS.

The design of this Pneumatic Duplex Labeler has been perfected over a period of years, and production perfected and proved in many, many of America's leading plants. Starting with time-tested principles of automatic labeling, Pneumatic carries through with the same type of precision manufacture and long life construction that has done so much to win, for Pneumatic machines, their "lower cost per container" reputation. PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Ave., North Quincy 71, Mass. : New York : San Francisco : Chicago : Los Angeles.

FIFTY YEARS OF PROGRESS 1895 1945

PNEUMATIC
PACKAGING AND BOTTLING
MACHINERY

Two Ways to Solve Your New Tag or Label Problem



NOW is no time to lose time, or risk mistakes, in creating new tags or labels. You'll get the right answer to your problem *faster* by consulting Dennison *first*.

Dennison know-how is founded on over 100 years' experience in originating and manufacturing paper specialties. And in producing tags and labels by the millions, we have done the impossible time and again.

If your problem is mainly one of design, Dennison recommendations for art, color scheme and lettering are based on scientific research and an intimate knowledge of selling conditions in every business.

Perhaps you face a difficult technical problem. How best to fasten your tag to your product, for instance. Or if you're thinking about labels, how to get one to stick to an unusual surface and to stay stuck or peel off as you require. Dennison has those answers, as well.

Remember, too, that you don't have to pay a premium price for expert knowledge when you put your problem up to

Dennison

HEADQUARTERS FOR PAPER SPECIALTIES

FREE — ILLUSTRATED BOOKLET — Our booklet *"If You Could Only Be At Every Point Of Sale"* is full of practical information on how to make your product more salable through correctly designed tags and labels. Just fill in and mail coupon and we shall be glad to *rush* a copy to you.

TAGS · LABELS · SEALS · SET-UP BOXES · MARKING SYSTEMS · PAPER SPECIALTIES

Dennison Manufacturing Company, 227 Ford Ave., Framingham, Mass.
Please send me without obligation, booklet "If You Could Only Be at Every Point of Sale."

Name.....

Firm.....

St. & No.....

City.....Zone.....State.....

Polyethylene film . . .

(*Continued from page 107*) fore, has insured adequate supplies of mepacrine tablets to be carried by British troops in the most difficult campaigning conditions or stored for long periods in tropical countries.

The experience gained in this war use will help point the way to civilian packaging adaptations of polyethylene. It is possible to produce polyethylene in various translucent and opaque colors to add to its attractiveness, although in the uncompounded state it has a characteristic hazy translucent appearance.

One distinguishing feature of polyethylene is the fact that it may be produced in both rigid and non-rigid forms. In thin sections, it may be classified as non-rigid, yet it lacks the limp, rubbery quality that characterizes most non-rigid plastics. On the other hand, in thick sections it has enough stiffness to be rated among the more rigid plastics.

The low water-vapor permeability and good water-resistance of polyethylene indicate that in its more rigid form it will prove suitable for the fabrication of containers for milk and other liquid foods and products. Its toughness and flexibility recommend it for collapsible tubes for foods, cosmetics and toilet accessories. As a means of protecting metal surfaces from corrosion, the material may be sprayed. For packaging in general, the plastic can be employed either as sheeting or as an impregnation.

The use of polyethylene as a modifying agent may be expected to contribute useful improvements in the properties of various rubber and wax products. It is also indicated that polyethylene has a useful future as a gasket material.

ACKNOWLEDGMENT: *Information and illustrative material for this article were provided through the courtesy of the Thomas Engineering Co., Newark, N. J.*

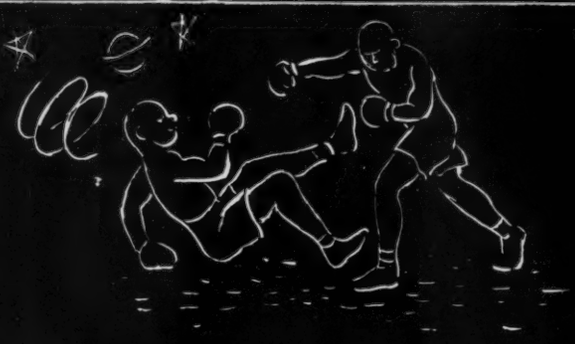
Metal lithography . . .

(*Continued from page 106*) with the product in the old dress, did not get the urge to buy this product at the point of sale. Very often a slight change in the design and a complete revision in color harmony will create the desired effect.

Naturally, the question now arises, when will specialty containers again be available? The industry is still beset with shortages of materials, but a few lines are already in production and the manufacturing tempo will steadily increase after the first of the year. A condiserable backlog of orders exists and many customers are considering coming out with new postwar designs—a factor that exerts considerable pressure upon art and design departments. Nevertheless, the industry is committed to the task of meeting all demands just as soon as possible and every effort is being made to do so.

Certainly the next few years will see a tremendous increase in the use of decorated metal containers. The public is weary of the drab packaging which, of necessity, characterized the war period. Secondly, we are now facing an era of unprecedented competition and any sales factor that can be added to a product will be seized upon avidly. Finally metal has proved to be one of the best—and we think it is *the* best—material for all-around packaging protection. The extra fact that such a package lends itself so well to attractive embellishment, merely adds to its prestige.

HIT PEACETIME COMPETITION WITH . . .



HEEKIN CANS

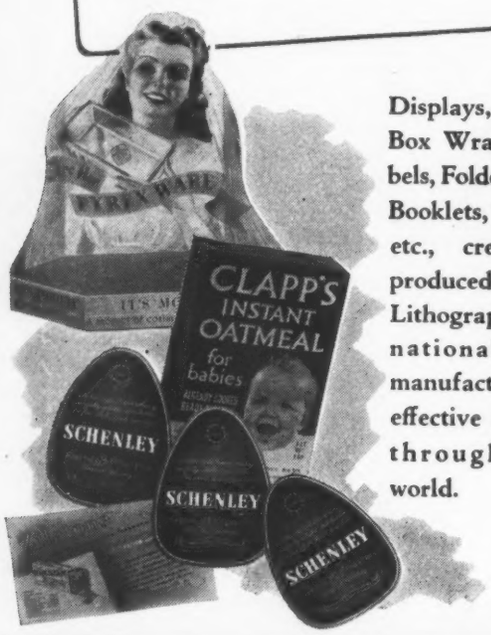
ANY SHAPE · ANY SIZE · ANY COLOR · ANY QUANTITY

THE HEEKIN CAN CO., CINCINNATI 2, OHIO

NATURALLY..
Attractiveness
INCREASES
DEMAND!

The days of post-war competition are here and attractive packaging and display advertising is more important than ever.

The Sale Lithograph Company takes great pride in labels, wrappers and displays designed and expertly lithographed by its staff of specialists, in colors chosen with infinite care, to attract attention with a maximum eye appeal.



Displays, Cut-outs, Box Wrappers, Labels, Folders, Inserts, Booklets, Calendars, etc., created and produced by the Sale Lithograph Co., for nationally known manufacturers do an effective selling job throughout the world.

Color Lithographers

Since 1904 Devoted to the Production of Fine Lithography

Success story . . .

(*Continued from page 113*) is still manual. Syphons are used for many purposes to transfer ingredients from drums into mixing containers, then into the bottles.

"I've learned to do almost anything with a syphon," she says, and with her assistants is able to produce many thousands of completed packages a month.

She is looking forward to the day, though, when she can purchase semi-automatic equipment for her present "assembly line."

One of the greatest obstacles during the past few years has been the necessity of tying up funds in packaging supply inventories in order to have quantities on hand for continuous operation. "Deliveries have been so slow," she said, "that oftentimes we have had to order much more at a time than we normally would if supplies would arrive in a few days as formerly."

But this inventory situation is only temporary. Bayberry Mist, due to the nostalgic appeal of the fragrance and of its packages, has made quite a name for itself. It is now ready to go ahead.

As soon as the material supply and transportation situation improve, the Blakemans want to take Bayberry Mist back to Provincetown. They love Provincetown and Provincetown needs many new industries and jobs for its younger generation.

They are at the point now where further expansion will mean setting up of a certain amount of machine packaging production. They believe that anybody can succeed in a small business, no matter how small, providing they have a good sound merchandising idea and the will to surmount all obstacles. It is enterprises like theirs that will provide substantial new outlets for tomorrow's packaging supplies equipment and machinery.

CREDITS: *Etching on glass, McKay Co., Brooklyn. Wood caps and containers, Schutz Bros., New York. Printed labels and wrappers, Hollis Press, New York, and Handicraft Press, New York. Suede labels and suede-covered bottles, Suede Co., New York. Silk cords and perfume balls, M. G. Cord and Trimming Co., New York, N. Y.*

What about Pliofilm?

(*Continued from page 117*) ment. Vegetables for far-distant markets can be vine-ripened when Pliofilm is used as a packaging agent, whereas present shipments must be picked when still green, the ripening process being completed in transit or in warehouses at their destination, with resultant lack of full flavor and value.

Another field in which Pliofilm promises to find increased usage is in the packaging of frozen foods. In addition to the excellent low-temperature, moisture-resistant qualities and good heat-sealing characteristics provided by this material before the war, a special quality of film has recently been produced that has good flexibility and strength at sub-zero temperatures. This new type of film will be supplied to primary packers and to the locker plant operators and home-freezing advocates.

Prior to the war Pliofilm came into wide acceptance for the protective packaging of processed cheese. A definite improve-

GOOD THINGS COME IN SMALL PACKAGES

AND HERE'S THE PROOF

CUTS ORIGINAL COST

because the price of Tanglefoot's new "Dry" Form Sealing Solvent W-51 is about fifty per cent less than the bulk liquid form.

CUTS FREIGHT COSTS

because shipping charges on the "dry" form are as much as 90% lower than on liquid solvent.

CUTS BREAKAGE COSTS

because there is virtually no risk of breakage in the "dry" form.

CUTS HANDLING COSTS

by making packaging faster and easier, saving time and labor.

ACTS FAST

Sealing Solvent W-51 gives a firm, permanent set within 5 seconds.

STAYS PUT

Despite rough or careless handling, W-51 with Solseal tape will not loosen, buckle or peel.

GIVES COMPLETE PROTECTION

When used with Solseal tape, Sealing Solvent W-51 provides *complete* water resistant sealing; holds firm under extremes of temperature; tape will not peel or buckle.

MEETS SPECIFICATIONS

for waterproof package sealing, as outlined by the U.S. Army and Navy in Jan-P-128.

EASY TO USE

Just put the powder and liquid from the "Dry" Form W-51 package into water; it dissolves instantly and is ready for use in any standard tape dispenser.

"Dry" Form Sealing Solvent W-51 is the truly modern solvent for moisture resistant package sealing. Order a stock today from your regular paper merchant, or send coupon, below, for your free sample.

A Product of

The TANGLEFOOT COMPANY

376 STRAIGHT AVENUE, GRAND RAPIDS 4, MICHIGAN

New York City Chicago Kansas City

Makers of

Gummed Tape, Solvents, Insecticides and Flypaper

FREE SAMPLE 376

The Tanglefoot Company
Grand Rapids 4, Michigan

Please send me, without obligation, a sample of your new "dry" form Sealing Solvent W-51.

Name and title.....

Firm name.....

Address.....

City.....*State*.....

IF

You Want a Job

DONE RIGHT

Give it to a Busy Man

Frankly, we've got more business than you can shake a stick at. Nevertheless, we operate on the old principle that if you want a job done right give it to a busy man.

That "coming plastics age" you've heard so much about is here. If it's plastics you need to put your product over PUT IT UP TO CONTINENTAL Today's Experts in Plastic Custom Injection Molding

Send or bring in your blueprints, or ask for a representative to call.

cpc

CONTINENTAL

PLASTICS CORPORATION

308 WEST ERIE STREET

CHICAGO 10, ILL.

ment over prewar film for this purpose has been made during the war and, in addition, Goodyear has developed new processes adaptable for both the curing and packaging of natural cheese.

A number of meat packers are reported to be looking into the possibilities of using the film for packaging a wide variety of meat products, including bacon, meat loaves and hams and fresh meat cuts such as steaks, chops and roasts. They are working with Pliofilm also in the wrapping of lard, scrapple, bouillon powder and other packers' items.

Several fisheries, in conjunction with the air cargo research conducted by Wayne University, Goodyear and several chain stores and airlines, are making test shipments of chilled seafood to inland cities, using Pliofilm as a wrapper. This field is looked upon as a great and potential market for the Goodyear product, as the film is said to serve as a retainer of the salt-water tang and freshness without the necessity of freezing.

Special film formulations which will provide high tensile and breaking strength, as well as tenacious heat seals, are under development for the packaging of free liquids and semi-liquid products such as lubricating oil, pickles in brine and mayonnaise.

Before the war Pliofilm was used as a component part of many packages for smoking tobacco, coffee and the like, and increased use in these fields is anticipated. Goodyear expects to introduce a special Pliofilm to be used for the wrapping of cigars.

Other developments in Pliofilm will be reported on in future issues of MODERN PACKAGING as they reach the stage of commercial practicability.

Stephano Bros. has installed methyl methacrylate covers on all cigarette machines to give operators a clear view of each of the hundreds of cigarettes held in production trays, enabling them to spot damaged or misplaced ones before they jam packaging machine hoppers. Covers, 1/4-in. transparent sheets, 11 by 27 in., are attached to the regular wooden or aluminum trays with metal hinges; swing out to facilitate removal of the injured cigarette.

CREDIT: *"Lucite" methyl methacrylate resin, E. I. du Pont de Nemours and Co., Inc., Wilmington, Del.*

You'll be Thankful

FOR SEFTON'S POST-WAR "PROFIT PACKAGING"

Thanks to Sefton you can give your product a package that has beauty and utility value, too! The string-opening can is a timely example. It opens easily and can be closed again . . . features that give it important consumer-appeal. There are many other advantages* in the string-opening can. Depend upon Sefton for post-war "Profit-Packaging!"

*Other features:

- *It factory-seals your product*
- *It's tamper-proof*
- *It has wide opening to facilitate packing*

SEFTON

FIBRE CAN COMPANY

ST. LOUIS • • • • • NEW ORLEANS

DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul Omaha • New York • Cincinnatti • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle

FOOD LABEL

the paper that will identify your food products

This new food products label paper has been developed as a result of government instructions to packers to place bands on frankfurters, sausages and other prepared meats in conformity with Pure Food Laws. Odorless — therefore particularly adapted for labeling food.

EASILY ATTACHED . . . heat sealing

Temperature for proper sealing depends upon length of time of contact with heating element and amount of pressure applied, but 225°-250° F. appears to be satisfactory on most equipment. Sticks to moisture-proof heat sealing cellophane at 225°-250° F. Send for additional test samples.

COMPLIES WITH ALL GOVERNMENT REGULATIONS

A McLAURIN-JONES Product

McLAURIN-JONES COMPANY · BROOKFIELD · MASS

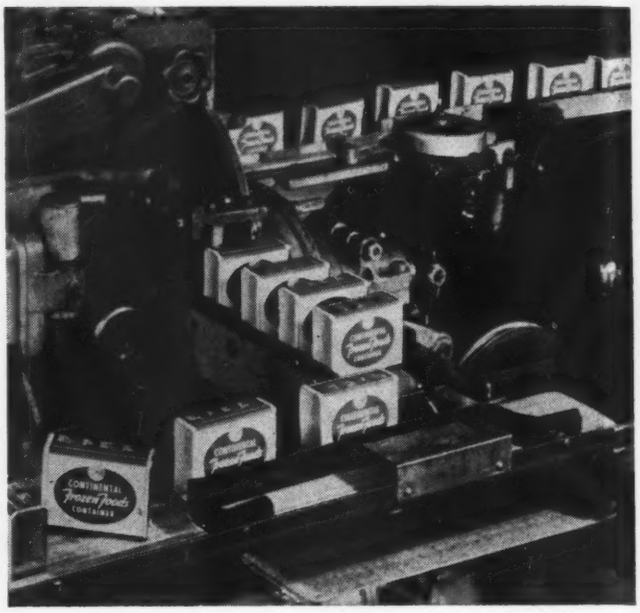
McLAURIN-JONES COMPANY

496 McLaurin St.

BROOKFIELD, MASSACHUSETTS

Paper with metal ends for frozen foods

Continental Can Co.'s paper division has announced the development of a new paper-and-metal frozen food container that can be used on high-speed filling and closing equipment.



The company claims its storage tests prove that vegetables packed in this new container register negligible moisture loss over a period of a year.

Although almost two years of laboratory development and field experimentation have gone into perfecting the forthcoming package, no orders are yet being taken, since, according to Continental, it would be sheer speculation for anyone to say when adequate equipment will be available as well as supplies of raw materials for commercial production. However, the company has taken every step necessary to insure maximum production as soon as conditions permit.

Continental's background in the frozen food packaging field goes back to 1929 when the Mono Service Co., now part of the company's paper division, began making 12- and 16-oz. paper cups for a variety of frozen foods, including fruits and berries packed in syrups, vegetables and shellfish. A few years later liquid-tight round paper containers, also made by Continental's Paper Division, came into widespread use in the frozen shellfish field.

The company points out that experience acquired in making these all-paper containers—particularly regarding the kinds of paper best suited for quick-freezing and prevention of dehydration losses—have greatly contributed to the development of the new paper-and-metal can. Likewise, Continental's background in metal can-making, which extends over the past 40 years, has been of immense value in designing a complete frozen food container suitable for high-speed filling and closing operations.

The new frozen food container has a treated paper body with metal ends. Being flat and rectangular in shape, the container permits economical use of refrigerator space.

This new package is claimed to have a number of advantages. Being rigid and sturdy, it offers maximum protection against dehydration, oxidation, loss of flavor, acquisition of off-flavors, leakage and loss of vitamins. Its adaptability for automatic filling and closing operations materially reduces time and labor costs and, therefore, makes it an economical package.

Remember This?

A Headache to You, but it was Our problem!

Decotone Products Division, in collaboration with the Government Printing Office, developed and produced all of the special protective ration stamp papers used by the U. S. Government during the war.

Creating special purpose, counterfeit-proof papers like these during the stress of war and urgency of need is no small undertaking. Its successful accomplishment may be credited largely to 85 years of papermaking research — plus the loyal service of our employes.

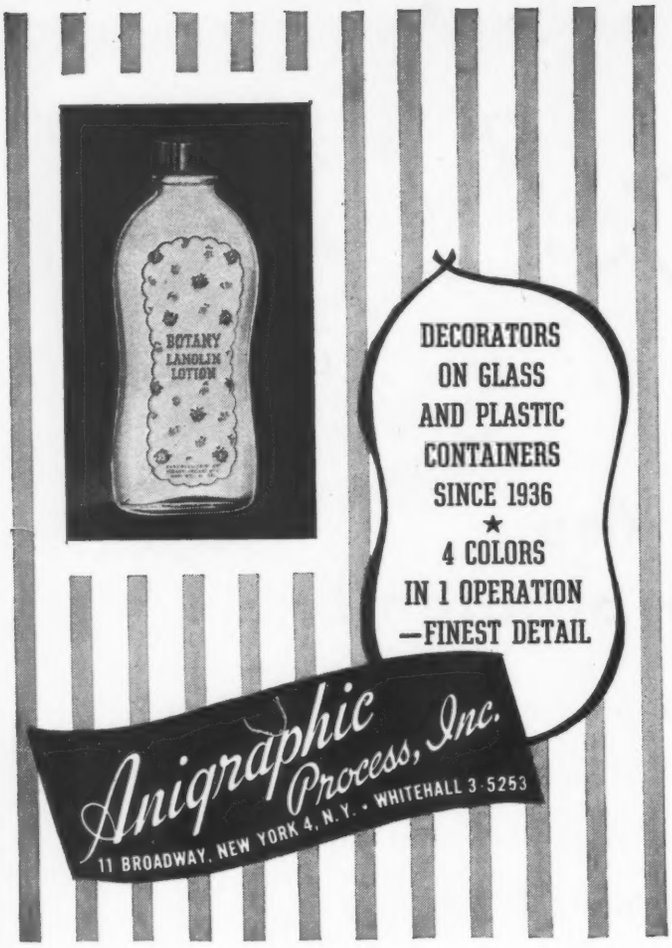
It is our hope that ration stamps will soon entirely disappear from our daily life. But Decotone know-how will remain. The alert papermaking and converting knowledge that developed these special papers and the equipment that produced them, are available to you.

You are invited to consult our paper technicians on all your packaging problems that concern paper. Our research, development and design facilities are at your service.

DECOTONE

PRODUCTS DIVISION PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

Fitchburg Paper Company
FITCHBURG, MASS.



Wartime Developed Packagings
...Available for General Use

Waterproof Kraft papers, greaseproof, non-corrosion papers, waterproof case-liners, cloth backed foil containers—safe guarded vital war material on the long journeys to Europe and the Pacific ... kept vital supplies in perfect preservation until needed.

Cloths, acetates, foils, boards, glassines, cellophanes and papers, "hot-melt" coated and/or laminated, developed for wartime uses to exacting military requirements, produced and proven under wartime conditions, will be available in increasing amounts as production for peace-time industry gets under way.

Limited quantities of laminated, coated and printed papers were supplied to essential civilian users before hostilities ceased.

We are interested in your future requirements and gladly offer our consultation . . . samples sent upon request.

The Milgate Line
PACKAGING DIVISION
E. W. Twitchell Incorporated
784 Public Ledger Bldg., Philadelphia 6, Pa.

For your information

(*Continued from page 152*) on any business subject covered by leading industrial, trade and business publications has been announced by **The Industex Company,** 228 N. LaSalle St., Chicago. The service comprises summaries of publication articles printed on 3 by 5-in. index forms, indexed by subject matter. They are supplied on a subscription basis, and forms are issued monthly on current publications for addition to a subscriber's file. Articles appearing in **Modern Plastics** and MODERN PACKAGING are covered in the **Industex** service.

The **Society of the Plastics Industry, Inc.,** has just issued a classification of plastics molding materials. It presents in chart form an authentic guide to the various properties of plastics molding materials as established by the material makers and molders. Both thermosetting and thermoplastic materials are included and values shown for their mechanical, electrical, optical, thermal, chemical and aging properties. Copies of the classification chart and explanation are available now upon request to **The Society of the Plastics Industry, Inc.,** 295 Madison Avenue, New York, 17, New York.

Omission: Labels for **Danforth Wines, Ltd., Toronto,** illustrated in the article **"Wine Labels"** in the **September** issue (p. 106), were designed by **Eric Aldwinckle, Toronto,** and **A. S. Bartman,** Toronto. Credit was inadvertently omitted.

Plants and people

(*Continued from page 150*) portation of war supplies and to the Chicago plant of the **Arvey Corp.** for materials needed for war.

Gilbert D. Snyder, art director of **Shoup-Owens, Inc.,** and **Karl Voss Corp.** and three-time top award winner in the **All-America Packaging Competition,** has left his post to form his own packaging design service with headquarters at 345 Broadway, New York City.

John J. Brossard, vice-president and director of **Container Corp. of America,** has announced his retirement as of October 1 and **Ira C. Keller,** vice-president in charge of the company's eastern division, has been elected in his place.

H. L. Hunter, after more than three years with WPB, has joined **Cans, Inc.,** as special sales representative.

Due to the death, last July 26, of **Nathan D. Isen,** founder and president of **Enterprise Paper Co., Paramount Paper Products Co.** and **Cellulose & Paper Converting Co.,** new officers have been announced: **S. Isen,** president and treasurer; **Harold Isen** and **Louis Gerber,** vice-presidents; **Theodore Isen,** secretary; **Jack Kaplan,** assistant treasurer.

John Adrian, special representative of **Sylvania Industrial Corp.,** died October 8, following a short illness.

Sol. M. Buschman, president and a director of the **National Can Corp.,** died on September 24 after a long illness. He was 55 years old.

There is an increasing demand for well-qualified speakers to carry the story of packaging to technical, business and consumer organizations. The Speakers Bureau of MODERN PACKAGING stands ready to help you in your search for such a speaker.

Announcing

NEW 1946
PACKAGING CATALOG

Advising

IMMEDIATE SPACE RESERVATION—
SPACE ALLOCATED AS
ORDERS RECEIVED

SPACE RATES AND CIRCULATION DATA ON REQUEST

1946 PACKAGING CATALOG

PACKAGING CATALOG CORPORATION

122 EAST 42nd STREET • NEW YORK 17, N. Y.

THE FIRST STEP IN BUYING ADHESIVES

SEND US SAMPLES OF MATERIALS TO BE BONDED

Paisley Scientific Adhesive Service starts work immediately upon receiving samples of the materials to be bonded. Trained Paisley Adhesive technicians scientifically select the one perfect adhesive formula to suit the materials, papers, cartons, etc., submitted. An Adhesive Operation Data Sheet will be forwarded to guide you in supplying us with the information we need. This is the modern way to obtain an adhesive that will give greatest speed and efficiency in your bonding or packaging operations. Start now. Buy your adhesives this new, this *better* way. Write our nearest laboratory for an Adhesive Problem Data Sheet. At the same time be sure to mail the samples of the material to be bonded!

Paisley SCIENTIFIC ADHESIVE SERVICE

PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.

PERMANENT

Surface Decorations On Every Type Of Package!

New Process Allows Integral Color Decoration of Plastics, Metal, Glass, Wood and other Surfaces

Creative's package decoration is proved permanent in actual use by the leading names in American packaging. Scratch-proof, rub-proof, water and alcohol-proof decorations, trade-marks and designs on dials, bottles, plastic containers, etc. No limitation on colors or design. Send for samples and prices.

Creative

PRINTMAKERS GROUP

14 West 17th Street **NEW YORK 11 · CH 3-6800**

Surface Decorators for the Packaging Field

THE QUESTION

★As submitted by machinery manufacturer's Advertising Manager to 189 Customers and Prospects—"Will you be good enough to number the *plastics* publications you see or read in the order of *their value* and interest to you."

[redacted] ★

[redacted]

Gentlemen:

Both of us get a number of plastics publications today. These are variously regarded, and we should value your frank opinion of them. Will you be good enough to number the publications you see or read (1, 2, 3, etc.) in the order of their value or interest to you. Then return the bottom of this letter, signed or unsigned, as you prefer, in the stamped envelope enclosed for your convenience.

We are sending this request to a selected list of names, and if it would be of value, we'll gladly send a tabulation of the results for your personal information.

Very truly yours,

[redacted]

[redacted] Advertising Manager.

I see or read and evaluate the following publications in the order numbered:

Modern Plastics
Pacific Plastics
Plastics
Plastics Reporter
Plastics and Resins
Plastics World

[redacted]

THE ANSWER

Tabulation of Response ★★

Questioner . . **Plastics Machinery Mfr.**

List Questioned . **Customers and Prospects . . . The Plastics Industry's Leaders**

Date of Questionnaire . **April 20, 1945**

Number of Letters Mailed . . . **189**

Number of Responses **138**

Results:

NO. 1 PUBLICATION	*Mentions*
Modern Plastics	**123**
Plastics	**6**
Plastics World	**3**

★★ The figures herewith are taken from the advertiser's original report. Photostatic copies of the complete, tabulated results available upon request.

Advertiser's intensive poll rates Modern Plastics as its industry's **No. 1** *publication:—*

123 to 6

As a guide in charting the course of his advertising budget, the Advertising Manager for a well known plastics machinery manufacturer recently submitted a questionnaire (reproduced at left) to a selected list of 189 names — chiefly, customers.

From 138 responses . . . 123 checked Modern Plastics as the industry's No. 1 publication — two of the other five specified publicatons receiving only 6 and 3, respectively.

So that so overwhelming a margin of publication leadership might serve as a beacon to all other budget builders, Modern Plastics sought and secured the questioner's permission to publicize the results.

As we see it, the reproduced figures do not require the support of any additional sales conv.

modern plastics

The Meeting Place **MAGAZINE** *of Plastic Minds*

PUBLISHED BY MODERN PLASTICS Inc., 122 EAST 42nd STREET, NEW YORK 17, N. Y.
Chicago • Cleveland • Los Angeles
Member Audit Bureau of Circulations (ABC)

Clearseal

NEW PLASTIC COATED FOILS, FABRICS AND PAPERS TO WATERPROOF AND MOISTURE-VAPOR PROOF PACKAGES. ALSO, PROTECTION AGAINST MILDEW, ACID, DAMPNESS AND RUST.

CLEARSEAL
CLEAVELAND LABORATORIES

"The Miracle of Plastic Coating"

mailed on request

CLEAVELAND

LABORATORIES AND MANUFACTURING CO., INC.

Pioneers in the application of Plastic Coatings to Textiles and Paper
Peapack, N. J., 7905 Empire State Bldg., New York, N. Y.
Sole Distributor: NATIONAL COATED PRODUCTS CO., 40 Worth St., New York (13) Tel. Rector 2-5446

STENCILED SHIPMENTS INSURE FAST HANDLING

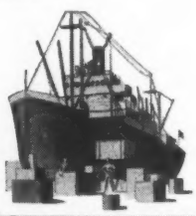
STENCIL MARK YOUR SHIPMENTS

CLEAR, EASILY READ, PERMANENT STENCILED ADDRESSED SHIPMENTS move through the Shipping Room faster and are speeded all along in transit.

THESE NEW DIAGRAPH-BRADLEY FOUNTAIN STENCIL BRUSHES . . . each represent major advancements in stencil brush design and efficiency . . . featuring: STURDY ALUMINUM CONSTRUCTION • LIGHT WEIGHT • LARGE FENDER GUARD to prevent ink on bristles getting on table, clothing, etc. • LARGE INK CAPACITY • ALWAYS READY FOR USE. THE PENACTION FEED* operates like a fountain pen • THE SIDE BUTTON STREAMLINER* is controlled by a diaphragm valve • CAN'T LEAK.

*Pat. App. For

Railroads and Truckers now recommend STENCILING. See: Revised Marking Rule No. 6 revised to include the following "Each package must be stenciled or otherwise plainly marked."



FOR SPEEDING SHIPMENTS USE

- D-B INKS
- D-B STENCIL BOARDS
- D-B FOUNTAIN STENCIL BRUSHES
- D-B FOUNTAIN MARKING PENCILS
- D-B STENCIL CUTTING MACHINES

COMPLETE SHIPPING ROOM SUPPLIES

D.B. **DIAGRAPH-BRADLEY**
STENCIL MACHINES
NO. 84 DIAGRAPH-BRADLEY BUILDING
ST. LOUIS 8, MISSOURI
Distributors in Principal Cities
See Your Telephone Directory—Classified Section Under STENCIL CUTTING MACHINES

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF STENCIL CUTTING MACHINES

FINE WOODEN CHESTS BOXES · DISPLAY CASES

"From Standing Timber to Finished Product"

We specialize in the design and manufacture of silverware chests, jewelry and display cases, wooden boxes, packing cases and other wood containers. Your inquiry invited.

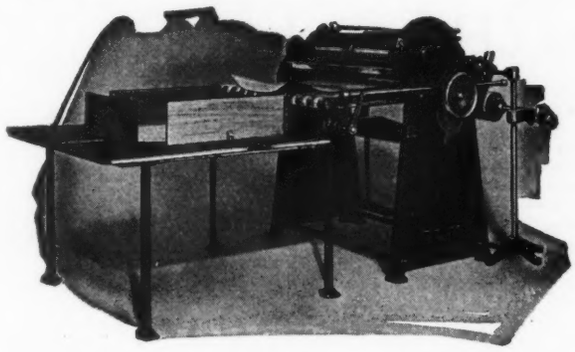
ROCK

Manufacturing Company

STOUGHTON, MASSACHUSETTS

Many Great Nations Are Already Planning Post War Programs

as are also many business men—ARE YOU?



THE BECK SHEETER

After "Unconditional Surrender" is a fact of history, you will want the highest productive Sheeting equipment obtainable, to meet competition. Your choice may be from the hi-speed Electric Eye machines for "spot sheeting" down to the more simple standard machines for plain work.

Write us to-day for to-morrow.

CHARLES BECK MACHINE CO.

13th & Callowhill Streets Philadelphia, Pa.

TURN OVER YOUR SALES TO THE

HUBBS HOUSES

FOR A

DISTRIBUTORSHIP

THAT MEANS

LEADERSHIP

in America's No. 1 Market from Indiana East

PLEASE CONTACT THE HUBBS HOUSE NEAREST YOU

CHARLES F. HUBBS & COMPANY
383-389 Lafayette Street
*30 Beekman Street
NEW YORK 3, N. Y.

HUBBS & CORNING COMPANY
BALTIMORE 1, MD.

HUBBS & HOWE COMPANY
BUFFALO 7, NEW YORK

HUBBS & HASTINGS PAPER CO.
ROCHESTER 8, NEW YORK

CHARLES F. HUBBS & COMPANY
BRIDGEPORT 7, CONN.

INTERSTATE CORDAGE & PAPER CO.
PITTSBURGH 22, PA.

HUBBS PAPER COMPANY, INC.
HOLLIS 7, NEW YORK

HUBBS & HOWE COMPANY
CLEVELAND 14, OHIO

HOLLAND PAPER COMPANY
BUFFALO 7, NEW YORK

CHARLES F. HUBBS & COMPANY
TROY, NEW YORK

and in Canada

VICTORIA PAPER & TWINE CO., LTD.
TORONTO

VICTORIA PAPER & TWINE CO., LTD.
MONTREAL

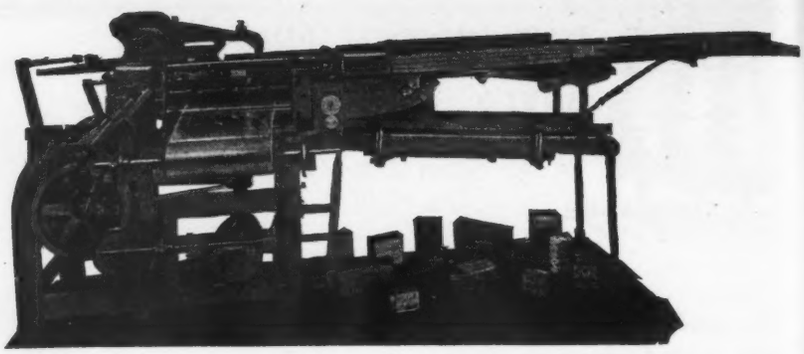
VICTORIA PAPER & TWINE CO., LTD.
HALIFAX

GARDEN CITY PAPER MILLS CO., LTD.
ST. CATHARINES, ONT.

CANADIAN VEGETABLE PARCHMENT CO., LTD.
MERRITTON, ONT.

WAREHOUSES AT ALL THE ABOVE.

Long range ..low cost



WRAPPING SERVICE

The low cost operation of the Hayssen Package Wrapping Machine has been recognized by a long list of satisfied users. Because of the small number of moving parts and the single cam shaft that operates and controls all moving parts of the machine, the Hayssen is known for its mechanical simplicity. The many additional and exclusive features of the Hayssen are worth investigating, if you, too, are interested in obtaining Hayssen Low Cost Wrapping Service. Write the factory today, outlining your specific problems. You are under no obligations, of course.

IT PAYS TO WRAP THE HAYSSEN WAY

HAYSSEN MFG. COMPANY • SHEBOYGAN, WIS.

HAYSSEN ELECTRONIC CONTROLLED **WRAPPING MACHINES**

The night was dark but the air was blue when Gramp stepped on the fly paper the wind had blown from the window sill. "Damme," said the old boy, "it sticks tighter than the wife's relatives!"

But Tanglefoot fly paper was just a stripling in sticking compared to present day Tanglefoot Kraft Sealing Tape. It never lets go! A super tape for those who realize the value of maximum product protection. Insist on

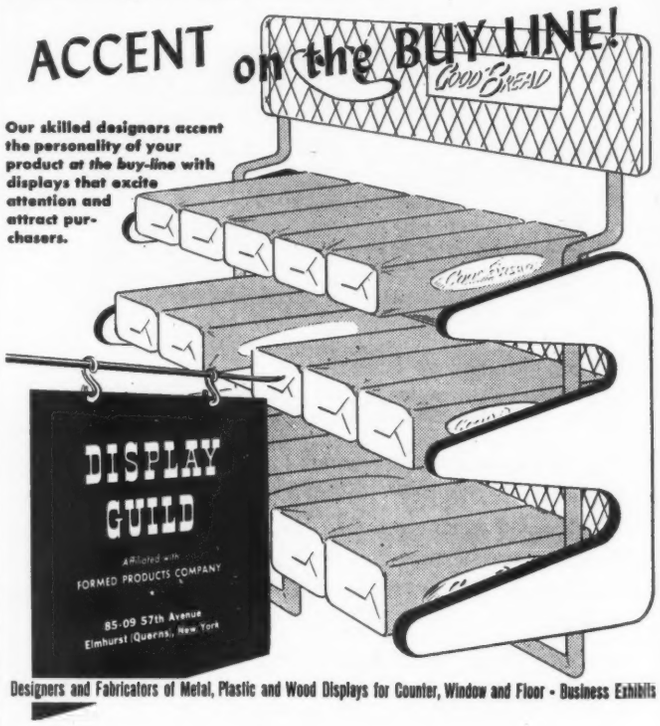
Tanglefoot GUMMED KRAFT SEALING TAPE

THE TANGLEFOOT CO., 405 Straight St., Grand Rapids 4, Mich.

★ ★ ★ ★

MERCHANDISING DISPLAYS with Beauty, Function. and Force

ACCENT on the BUY LINE!



Our skilled designers accent the personality of your product *at the buy-line* with displays that excite attention and attract purchasers.

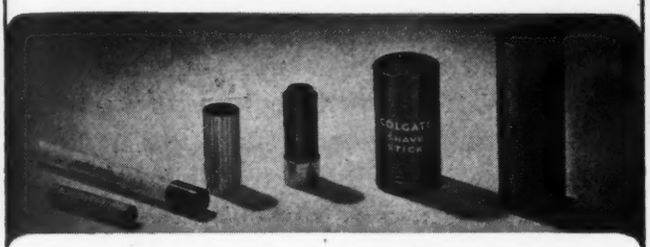
Designers and Fabricators of Metal, Plastic and Wood Displays for Counter, Window and Floor • Business Exhibits

★ ★ ★ ★

MANUFACTURERS OF PAPER TUBE CONTAINERS

FUNCTIONAL PACKAGES
for
War and Post War

The engineering experiences of war have developed smart new packages for post-war times.



attractive • weight-saving

Our long experience in the fiber tube industry has given us the "Know-how" to interpret post-war containers. Consult us on your packaging problems.

NIEMAND BROS. Inc.

37-11 35th Avenue, Long Island City, New York

Ravenswood 8-0909 Teletype NY-4-1032

MANUFACTURERS OF PRECISION PAPER TUBE PRODUCTS

Full Coverage

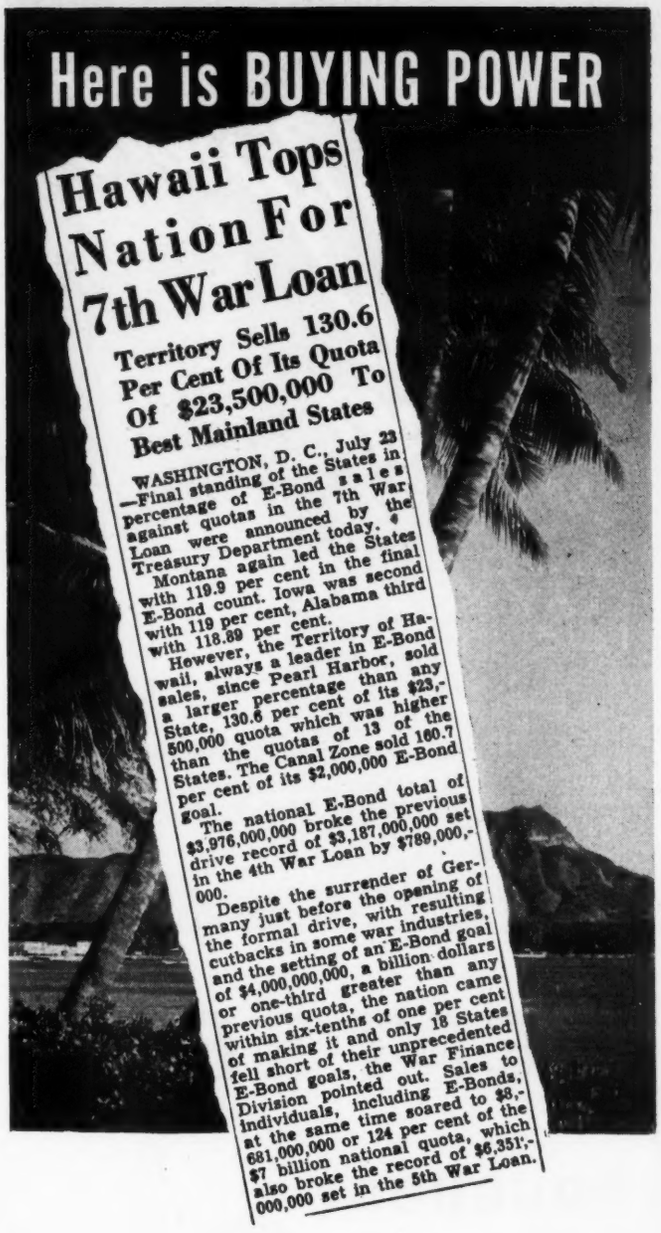
FOR YOUR
PACIFIC COAST
DISTRIBUTION!

An aggressive, well-established Western sales organization specializing in packaging products is now considering the addition of new lines. Complete Pacific Coast distribution, warehouse, sales and service facilities, plus an experienced sales force of seven field men, and a total staff of twenty, assures proper and effective representation. Twenty years of soundly-financed, successful experience in handling nationally recognized products in the packaging field warrants your thorough investigation with a view to establishing strong Pacific Coast distribution. Write:

BOX NO. 355D MODERN PACKAGING
122 East 42nd Street
NEW YORK 17, N. Y.

Your inquiries will be treated with strict confidence

Here is BUYING POWER



Hawaii Tops Nation For 7th War Loan

Territory Sells 130.6 Per Cent Of Its Quota Of $23,500,000 To Best Mainland States

WASHINGTON, D. C., July 23 —Final standing of the States in percentage of E-Bond sales against quotas in the 7th War Loan were announced by the Treasury Department today.

Montana again led the States with 119.9 per cent in the final E-Bond count. Iowa was second with 119 per cent, Alabama third with 118.89 per cent.

However, the Territory of Hawaii, always a leader in E-Bond sales, since Pearl Harbor, sold a larger percentage than any State, 130.6 per cent of its $23,500,000 quota which was higher than the quotas of 13 of the States. The Canal Zone sold 160.7 per cent of its $2,000,000 E-Bond goal.

The national E-Bond total of $3,976,000,000 broke the previous drive record of $3,187,000,000 set in the 4th War Loan by $789,000,000.

Despite the surrender of Germany just before the opening of the formal drive, with resulting cutbacks in some war industries, and the setting of an E-Bond goal of $4,000,000,000, a billion dollars or one-third greater than any previous quota, the nation came within six-tenths of one per cent of making it and only 18 States fell short of their unprecedented E-Bond goals, the War Finance Division pointed out. Sales to individuals, including E-Bonds, at the same time soared to $8,681,000,000 or 124 per cent of the $7 billion national quota, which also broke the record of $6,351,000,000 set in the 5th War Loan.

Here's a market described in language any business man can understand. Hawaii is a market that can and will absorb any attractive product that is effectively introduced.

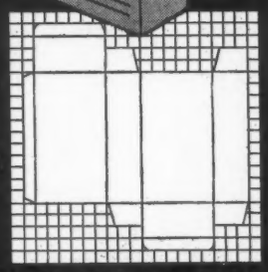
That's our function—wholesale distribution. R. A. Howe & Co. is young enough to be vigorously aggressive—old enough to have an outstanding record in launching new products and building volume for those already here.

Hawaii first—the Far East post war. That's our recommendation. And with headquarters in Honolulu and a branch in Manila, we'll be ready in both areas to serve you.

R.A.HOWE & CO. WHOLESALERS AND DISTRIBUTORS *Hawaii*

816 FORT STREET • HONOLULU, HAWAII

Designed to SELL on SIGHT



QUALITY PRINTED
CLAY COATED
Folding Boxes

SKETCHES and SAMPLES SUBMITTED

ACME FOLDING BOX CO., INC. EST'D 1914
141 E. 25th St., New York 10, N. Y.
Telephone MUrray Hill 4-7520

LUSTRALITING • VARNISHING • LACQUERING • PARAFFINING
GUMMING • STRAIGHT CUTTING • EMBOSSING
PERFORATING • PUNCHING

- Finishing - it's the Finish that counts!

In packaging, the finish is important, too! Beautiful colors and designs need the extra sparkle of a good coating, the extra distinction of embossing or die-cutting.

LUSTRALITING
STRAIGHT CUTTING

JOHN W. CRAWFORD CO.
Est. 1859 New York, N. Y.
160 Varick Street WAlker 5-5473
GUMMING
DIE CUTTING • EMBOSSING
STRAIGHT CUTTING • PERFORATING • PUNCHING

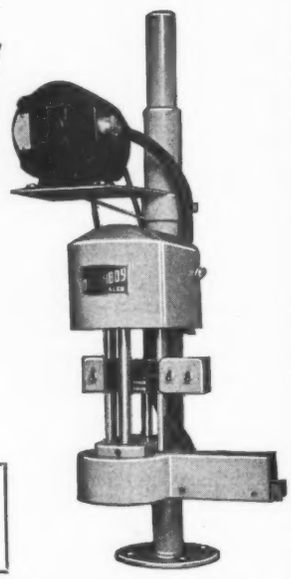
HEAT SEAL

with the famous

DOUGHBOY

Rotary Hot Krimp

SEALER



- √ SEALS ALL HEAT-SEALING MATERIALS
- √ SEALS BAGS POUCHES OR PACKAGES OF ANY SIZE OR WEIGHT
- √ THERMOSTATIC HEAT CONTROL
- √ SEALS 240 LINEAL INCHES PER MINUTE

Standard Model.....$199.50
Preheated Model.....$235.00
Good Delivery on High Priority

DOUGHBOY TOGGLE-JAW
A High Speed foot pedal sealer with positive sealing pressure and feather-touch foot pedal. Rheostat control.
3 SIZES—$98.50 UP

PACK-RITE MACHINES 828 N. Broadway, Milwaukee Wis.
Please rush complete information on your ☐ Doughboy Rotary Sealer ☐ Doughboy Toggle Jaw.
Firm.....
Att'n of.....
Address.....
City..... State.....
MP 944

ZOPHAR

WAXES

For paper board impregnation

For Dip Coatings
Emulsified Waxes
Coating Waxes

(Specification AXS 1015 or 52C-31) (Int.)

Waxes for Fungus Proofing

Our laboratory will welcome your problems

ZOPHAR MILLS INC.
FOUNDED 1846
106-26th STREET • BROOKLYN 32, N. Y.

Now!

. . . more than ever your product should be PACKAGED with *Sales Appeal*

LET *Traver* SPECIALISTS ANALYZE YOUR PACKAGING WITHOUT OBLIGATION!

● Traver engineers — technicians — sales minded designers — combine every phase of packaging know-how — proper protection of product, identification, and above all, sales-punch design! Send us your present package—and we will analyze it, give you our recommendations—with no obligations on your part!

This Idea Boomed Sales!

One hour after placement in stores, a newly designed cellophane wrap gave a product sales preference over competition on the market for 30 years, and in some cases, leadership in its field within 30 days!

Traver CORPORATION

PACKAGING THAT SELLS!

Convertors of CELLOPHANE—GLASSINE, FOILS, PROTECTIVE PAPERS
Manufacturers of LOXTITE partitions

358-368 West Ontario Street, Chicago 10, Illinois
122 East 42nd Street, New York City, New York

MAIL COUPON NOW!

TO TRAVER CORPORATION, (MP 11-45)
358 W. Ontario Street, Chicago 10, Ill.

● Without obligation, we would like counsel from your packaging engineers and designers. We enclose our present package (or) description of new product is attached.

Signed_____

Company_____

Street_____

City_____ State_____

SELECT YOUR TAPES AND SPECIALTIES FROM OUR COMPLETE LINE

A QUALITY PRODUCT
On-to-Sta
GUMMED TAPES
NEVER LET GO
MADE TO STAY ON
ATLANTIC GUMMED PAPER CORP. — BROOKLYN, N.Y.

GUMMED SISAL TAPE
HEAVY GUMMED KRAFT
GUMMED CAMBRICS *
GUMMED SEALING TAPE, PLAIN & PRINTED *
"CARPAC" REINFORCED SEALING TAPE
ASPHALT LAMINATED REINFORCED WATERPROOF WRAPPING PAPER
VENEER GUMMED TAPE
GUMMED HOLLANDS *
"SOLSEAL" WATERPROOF TAPE
CREASED GUMMED STAY *
COMBINING

*SAMPLE BOOKLETS UPON REQUEST

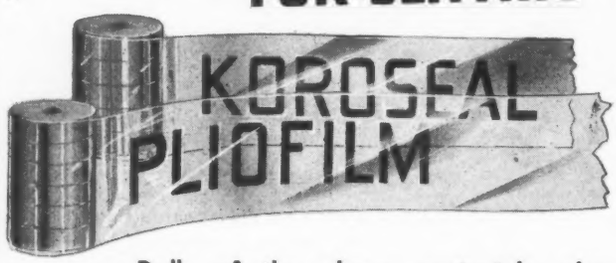
ATLANTIC GUMMED PAPER CORP.
MANUFACTURERS OF "On-to-Sta" GUMMED PAPERS
PLANT & MAIN OFFICE: ONE MAIN ST., BROOKLYN 1, N. Y.
BRANCH OFFICES PHILADELPHIA • PITTSBURGH • CHICAGO • BUFFALO • BOSTON • ATLANTA • LOS ANGELES • HAVANA

SELECT YOUR TAPES AND SPECIALTIES FROM OUR COMPLETE LINE

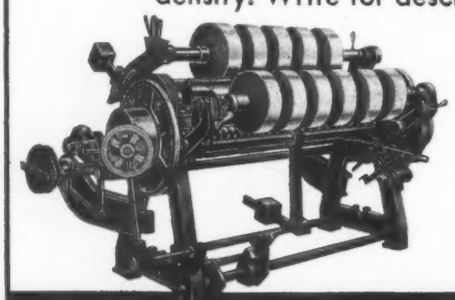
SELECT YOUR TAPES AND SPECIALTIES FROM OUR COMPLETE LINE

SELECT YOUR TAPES AND SPECIALTIES FROM OUR COMPLETE LINE

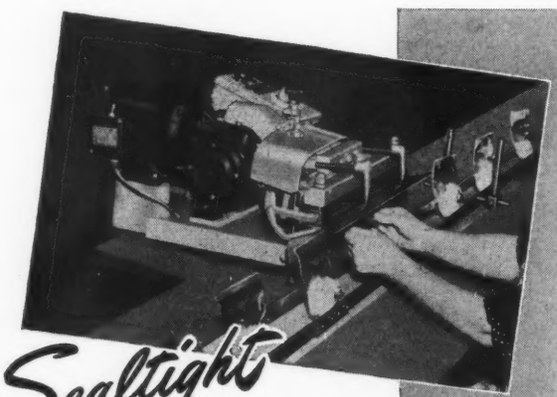
CAMACHINE 24-7
FOR SLITTING



Rolls of the above materials, also rolls of similar materials are accurately slit on CAMACHINE 24-7 and rewound into rolls of uniform density. Write for descriptive folder.



CAMERON MACHINE COMPANY 61 POPLAR ST., BROOKLYN 2, N. Y.
MIDWEST OFFICE: Harris Trust Building, 111 West Monroe Street, Chicago 3



Sealtight
THE ORIGINAL
BAG HEAT SEALING MACHINE...

Offers: (1) Automatic Folding Mechanism. (2) Hydraulic Type Thermostatic Heat Control. (3) Date Coding Attachment. (4) Hole Punching Attachment. (5) Special Model for Large Bulky Bags. (6) Will Use Any Type of Heat Sealing Bag Material. (7) Precise, Sturdy Construction. (8) 12 Years of Experience Exclusively in the Production of Crimp Heat Sealing Machines.

MODEL 12 F (FOOT POWER) AVAILABLE FOR IMMEDIATE DELIVERY

NEW "PACER" MOTOR DRIVEN MODEL

WRITE FOR CATALOG SHOWING FULL LINE INCLUDING MOTOR DRIVEN MODELS

HEAT SEAL-IT COMPANY
4316 LANCASTER AVE., W. PHILADELPHIA 4, PA.

HUMITUBE

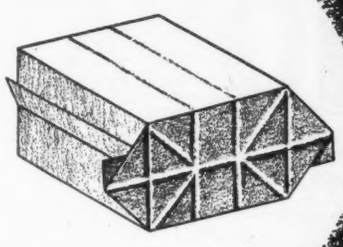
REG. U.S. PAT. OFF.

A Pioneer Converter of Containers Made of

DU PONT
Cellophane

HUMITUBE MFG. CO.
PEORIA 3, ILLINOIS

Are You SHIPPING Your PRODUCT OVERSEAS?



McKay-Davis APPROVED Case Liners Now Available

● Our expanded facilities for the production of *OrdnanceApproved* water proof case liners permit our supplying L2 and M2 liners to a few additional manufacturers. The McKay-Davis designed patented tab liners are unique in simplicity, tailoring and high quality. Huge production, automatic, quality controlled, assures economical price—immediate delivery. Consult our packaging engineers about your problems.

McKAY-DAVIS CO.
TOLEDO, OHIO

For Product Protection

AUTOMATIC MOISTENING CONTROL

RECOMMENDED BY—

ASSOCIATION OF AMERICAN RAILROADS
OPERATIONS AND MAINTENANCE DEPARTMENT
C. H. SUFORD, VICE-PRESIDENT
FREIGHT CLAIM DIVISION

THE GUMMED INDUSTRIES ASSOCIATION, INC.
10 WEST 44TH STREET
NEW YORK 18, N. Y.

When gummed tape loosens up ... package failures most often come from faulty application rather than from the tape itself. We recommend that a tape machine ... equipped with automatic-moistening-control, be used.

PLUS VALUES YOU GET WITH COUNTERBOY

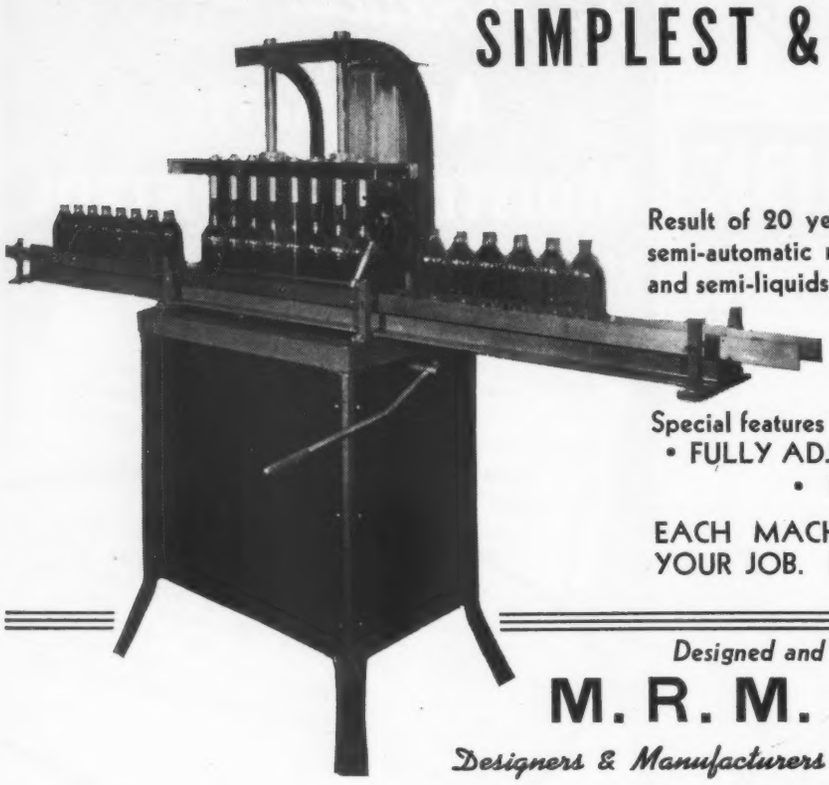
Besides Automatic Moistening Control, which means the elimination of the human element in the conditioning of all gummed tape used for product protection, Counterboy material saving features cut tape costs from 10% to 40%; and Counterboy's fast dispensing during rush hours means quicker and better shipping service.

Counterboy
TAPE-SHOOTER
has original patented AUTOMATIC MOISTENING CONTROL

JUNIOR Model

Manufactured by
BETTER PACKAGES, Inc., Shelton, Conn.
Branch Offices: CHICAGO • NEW YORK
Canadian Factory: TORONTO

NEW *Dripless* LIQUID FILLER
SIMPLEST & STURDIEST ON MARKET



Result of 20 years manufacturing experience, this new semi-automatic machine will feed all types of liquids and semi-liquids, such as heavy LOTIONS and SHAMPOOS, at a high rate of speed (40-50 pint bottles per minute, other sizes in proportion.)

Special features include: • Fully automatic overflow.
• FULLY ADJUSTABLE FROM 1 OZ. TO 1 GALLON.
• Supplied in 8-10-12 spouts.

EACH MACHINE IS CUSTOM BUILT TO DO YOUR JOB. Demonstration can be arranged.

Designed and Manufactured Exclusively by

M. R. M. COMPANY

Designers & Manufacturers of Fillers, Cappers and Conveyers

223 East 106th St. NEW YORK 29, N. Y. LEhigh 4-0207-8

Good Package Design

IMPORTANT TO MERCHANDISING AND TURN-OVER

Attractive packaging makes merchandise desirable. . . . It is the silent salesman of your product on retailers' shelves.

Recognized for their contribution to outstanding design in modern packaging, the ability and experience of the WLS staff of artisans are at your service.

Interview with Principals • No Obligation

32 Pages . . . 420 Pictures . . . an Exhibit of Performance
Write for a copy of it Today on your business letterhead

AMERICA'S LARGEST ORGANIZATION SPECIALIZING IN MERCHANDISE PRESENTATION

W. L. STENSGAARD AND ASSOCIATES, INC.

346 N. JUSTINE ST. • CHICAGO 7, ILLINOIS

When Eye-Appeal Means Sales-Appeal

Insist On

LANOVA

BOX and SPECIALTY PAPERS

That Add Distinction To Quality Merchandise

Your product looks better — sells better — when set off by a *Lanova* box or specialty paper.

- Metal Foils
- Fancy's
- Embossed
- Wood
- Pyroxylin
- Velours
- Trade Marks
- Flints

Large varied stocks maintained for immediate delivery. Write for sample sheets and books — on your letterhead, please.

Consult without obligation our staff of packaging-design experts — at your service always!

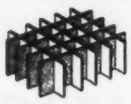
LACHMAN-NOVASEL PAPER CO.

111 Greene Street
New York 12, N. Y.
WOrth 4-6426
M-11

You Need Look No Further
... for Your Partition Needs

IMMEDIATE ATTENTION
Given to Requests for Estimates on

TRIMMED AND PLAIN
PARTITIONS
FOR SET-UP AND FOLDING BOXES



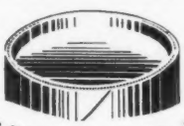
WRITE, PHONE or WIRE for Quotations on Your Requirements

Prompt Deliveries Guaranteed

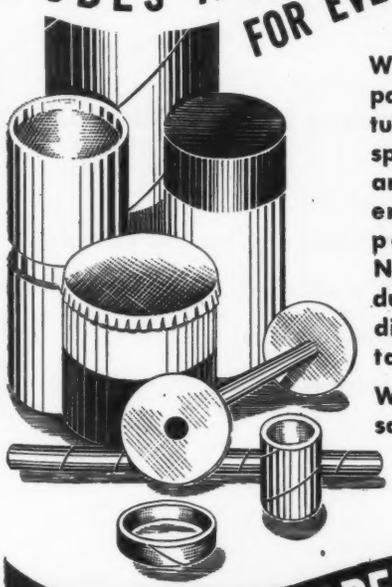
PETER

Reasonable Prices Assured

Manufacturing Co.
647-649 LEXINGTON AVE. BROOKLYN 21, N. Y.
Telephone: PLaza 9-2120



TUBES AND CONTAINERS
FOR EVERY PURPOSE



We manufacture paper cores, mailing tubes, ribbon blocks, spools, paper boxes and cans with metal ends, curled ends, paper cap ends. Noted for fast production—any length, diameter, wall. Containers developed.

Write or call for samples.

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in a
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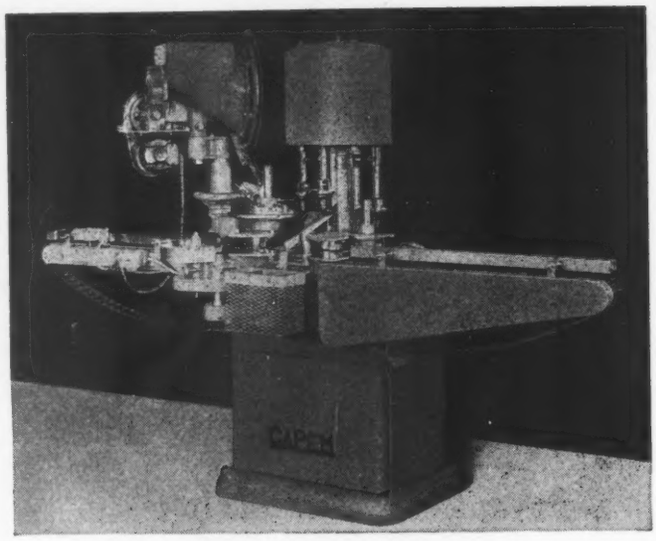
Paper Bag
for
PROTECTION

CTC

WATERPROOF LINERS AND BAGS
C. T. C.
INDUSTRIES, INC.
FRONT AND BECKETT STS., CAMDEN, N. J.



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. . . . APPLIES ANY SCREW-CAP AT 2000 TO 7500 AN HOUR . . . DELIVERS A LEAKPROOF SEAL . . . AT LOW COST

Available in 1, 2, 3, and 4 spindle models

Write for prices

CONSOLIDATED PACKAGING MACHINERY CORP.

BUFFALO 13, N.Y.

THIS "READY MADE" PACKAGING DEPARTMENT CAN SAVE YOU MONEY

We have { *THE ORGANIZATION* / *THE EQUIPMENT* / *THE "KNOW-HOW"* }

Our custom packaging department will do your packaging for you. All set-up and running, we are ready to take on your job.

A long record of successful packaging for other companies is your best guarantee of good service. We handle all types of dry powders, chemicals, cosmetics and household products in cartons, cans, set-up boxes, round paper packages or envelopes. We do your mixing, filling, weighing, labelling, etc., on high speed automatic equipment. Call on us to handle all or part of your packaging.

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Trained Thumbs

To predetermine, accurately, the ability of cartons and containers to withstand shipping stresses requires more than just mechanically precise equipment. Certain tests, such as for ply separation (shown above), call for skillfully trained hands. Our engineers helped develop specifications for the famous wartime V-boxes. To understand how container-testing can help solve your shipping problems, write for our new booklet "V-Boxes".

CONTAINER TESTING LABORATORIES, INC.
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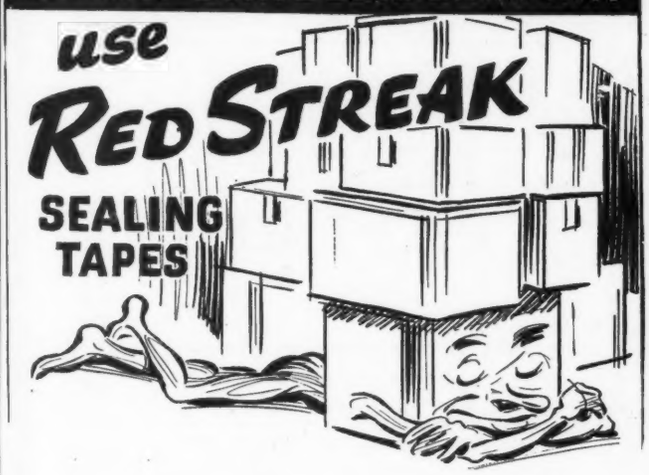
NEW YORK • CHICAGO • SAN FRANCISCO

For Your Own SOLID COMFORT

use **RED STREAK SEALING TAPES**



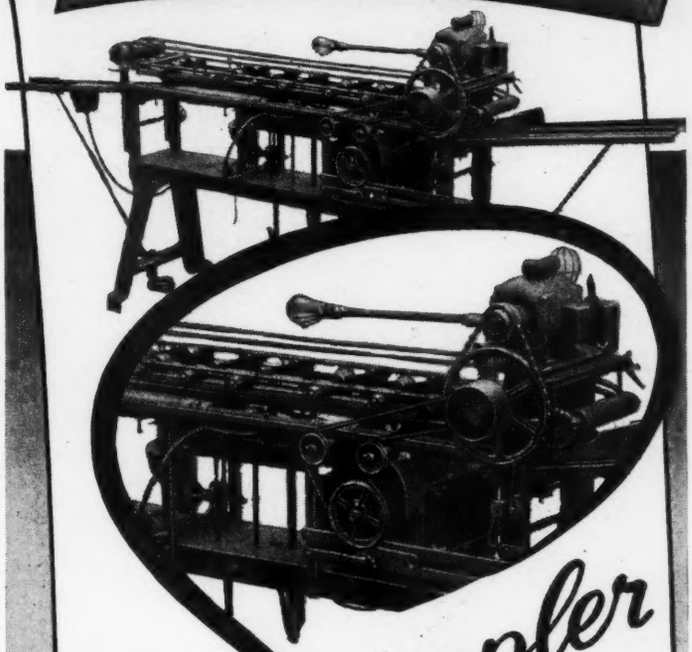
In "Red Streak" Sealing Tapes you find a combination of good paper, good glue and plenty of it—use "Red Streak" and end your sealing problems.

Ask your jobber for details, samples, prices.

"Red Streak" SEALING TAPES

BROWN-BRIDGE MILLS, Inc., Troy, Ohio

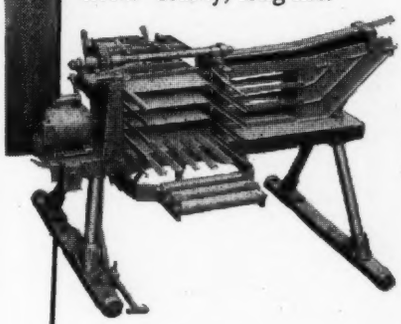
FMC — KYLER LABELERS



Simpler

The extreme simplicity of FMC-Kyler Labelers results from the absence of complicated mechanisms. This quality labeler does more and better work with about one-third fewer parts. One operator quickly and easily makes all adjustments for change in sizes of containers.

And also has these other unusual features! *Handles a wider range of work. *Lap Paste System. NO DRIP. Automatic adjustment for any width label. *Large Label Box holds two full packs of labels. *Automatic Control. If discharge chute is full, labeler stops. *Lower Operating Costs. Uses less paste and gum. *Lower Maintenance Costs. Fewer repair parts needed, and they cost less. *Speedy Size Change. No tools needed. All change points marked. *Seaming Pad easily removed, self-adjusting. *Adjustments provided for every possible need. *Sturdy, long life.



FMC — KYLER BOXER
All sizes have one-piece main frame construction, are extremely rigid, with great strength and durability. Maximum speed with minimum man power and floor space.

BRAND NEW FMC CATALOG *contains full details of these new additions to FMC's complete line of food processing equipment.*

K-102

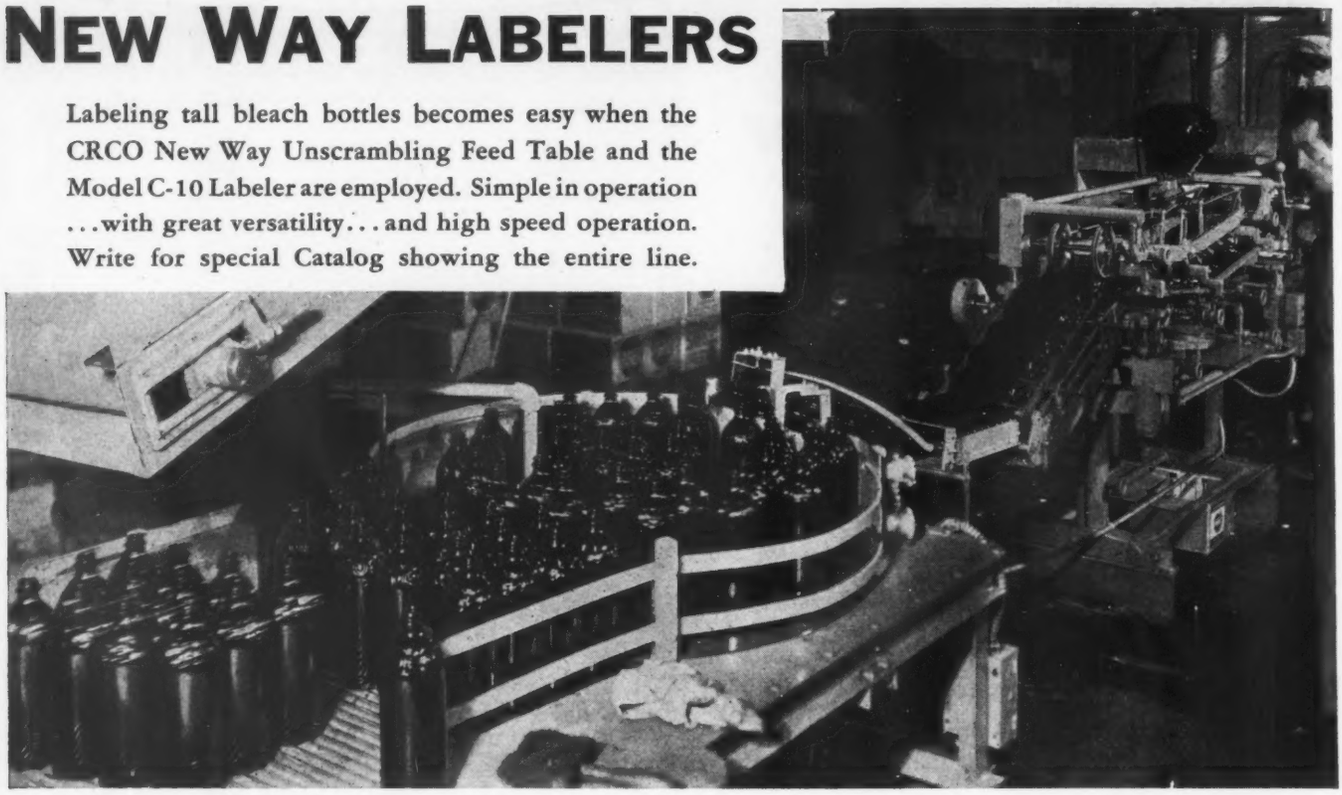
Food Fights for Freedom—Food Nourishes the Nations

FOOD MACHINERY CORPORATION

Sprague-Sells Division · Hoopeston, Illinois

NEW WAY LABELERS

Labeling tall bleach bottles becomes easy when the CRCO New Way Unscrambling Feed Table and the Model C-10 Labeler are employed. Simple in operation ...with great versatility... and high speed operation. Write for special Catalog showing the entire line.



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Get the help of this new office aid—*Photo*copying!

New, handy unit copies anything! Safeguards valuable originals—avoids errors!

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in the manufacture of

CAN & BOTTLE CLOSURES

LET us quote you on your requirements. Hundreds of dies and molds available for Essential Oil Cans, Sprinkler Tops, Screw Caps, Lead and Tin Coated Spouts, Metal Specialties. 85 years' experience in meeting the needs of packagers. Call upon us for aid.

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A MODIFIED "HOT MELT" DELIVERED AS A SOLID

Liquefies at 165 deg. F. May be thinned with hot water. Can be so treated that deposits become non-remeltable.

Has inherent flexibility and complete resistance to oils, greases, alcohol, turpentine, naphtha, other organic solvents, oxygen and other gases.

Will also mix with rubber latex.

Used as a protective coating, laminating adhesive, caulking compound, seam dope.

No priority required.

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WINS TOP AWARD!

The same creative skill and packaging know-how that won the top award for transparent containers in 1941 is at your service again for 1946.

Shaw-Randall's designing and production staff have been greatly enlarged during the busy war-time years. They're at your service now for better acetate packaging. Let Shaw-Randall submit designs and samples of the packages that will put your product among the winners.

SHAW-RANDALL COMPANY

PAWTUCKET • RHODE ISLAND

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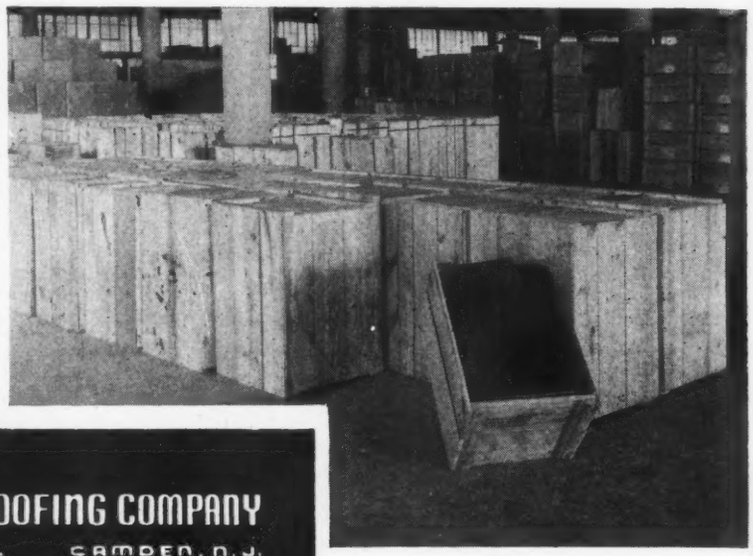
NATCO SPECIAL *Protective* PAPERS

(Government Standard)

FOR SPECIAL PURPOSES

#4—Box Lining—strong, flexible, water-proof papers are designed especially for maximum protection inside boxes. Such papers protect all types of merchandise from food to machinery.



Our special sheets are
Laminated Papers
Reinforced Papers
Ream Wrappers
Saturated Papers

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2. Box Lining
3. Box Covering
4. Small Parts Packing
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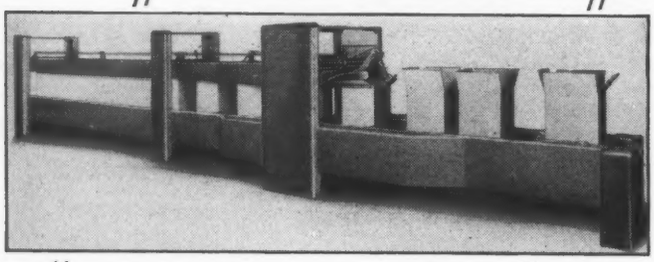
FRONT AND BECKETT STS. CAMDEN, N.J.
DUPLEX · SATURATED · REINFORCED · WAXED & OILED PAPERS
BUY UNITED STATES WAR BONDS & STAMPS

Designed for Efficient Packaging



ABC Automatic Top and Bottom CASE SEALER

Modern, streamlined design . . . requires no operator. Seals 30 cases per minute . . . both top and bottom, top only or bottom only. Fingertip control. Extra-rigid construction. Adjustable to 6"-18" width, 8"-30" length, 3"-28" height.

Special Engineering Service

Packaging machines correctly designed and constructed to fit your own special requirements.

ABC PACKAGING MACHINE CO.
QUINCY, ILLINOIS

Sealed to Prevent COLOR CHANGES

Don't make the consumer ask "which bottle is the freshest?" With vinegar, as with many other bottled products, uniform color means uniform quality. "Filma-Seal" protection keeps air out, preventing changes in color; double seals your bottle against sampling and leakage. Investigate "Filma-Seal."

The Double Seal Of Protection: "Filma-Seal"® Cap And Seal Applied As One

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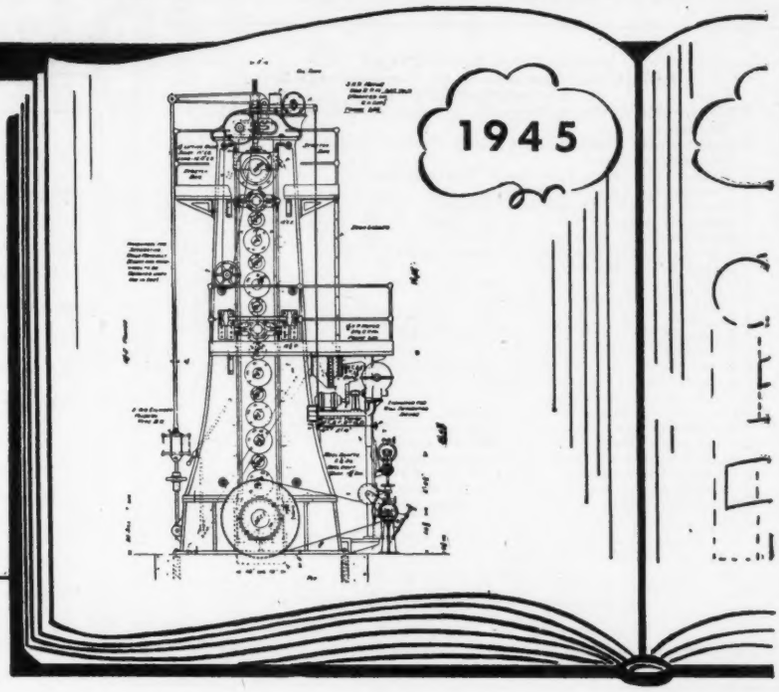
ANOTHER NORWOOD FIRST *on the Boards*



Ever since Norwood built the first glassine calender in the United States back in 1912, the Norwood line of paper finishing machinery has reflected the most advanced ideas of the industry.

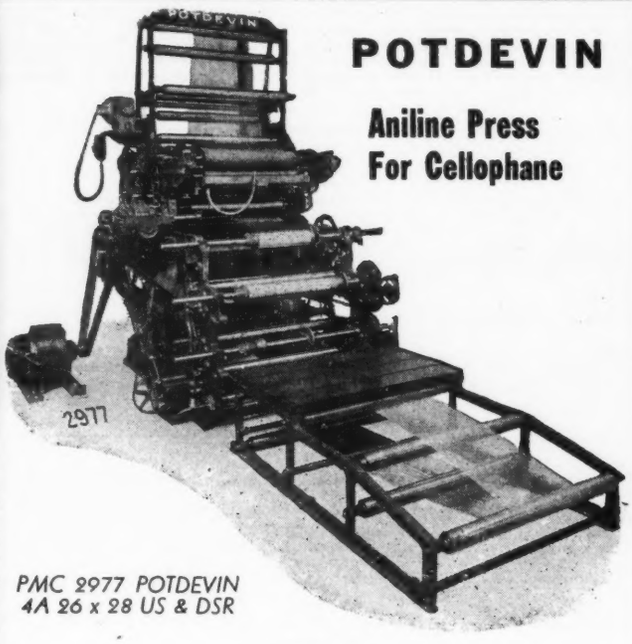
New Norwood "firsts" will be unveiled soon in this space — as streamlined new models move from the planning boards to the production lines. Included will be time-proved Norwood machines needed in every paper converting and packaging plant. Write us your needs.

Super Calenders — *Rotary Coating Units*
Friction Calenders — *Folding Machines*
Embossing Machines — *Laminating Equipment*
Multi-Color Rotogravure Printing Machines

C-2

The NORWOOD ENGINEERING COMPANY
14 No. Main St. • Florence, Mass.

"If you use Paper - you can use Norwood"



PMC 2977 POTDEVIN
4A 26 x 28 US & DSR

POTDEVIN

Aniline Press For Cellophane

(Model 304)

4-Color Multi-length pigmented Aniline Ink Web Printing Press with Unwind, Slitters and Dual Shaft Rewind. Especially suitable for cellophane.

Note: Continuous drive for ink fountain rollers;—long, variable drying runs between first and second colors, also after last color before rewinding.

POTDEVIN MACHINE CO.
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Established 1893 — **Tel. Windsor 6-1700**

Engineers of specialized packaging

We cordially invite you to send us your inquiries concerning the technical uses of paper in your peacetime production and packaging.

MOISTURE VAPOR BARRIERS.
WATER-PROOF CASE-LINERS.
SPECIALTY HANDMADE BAGS.

MELROSE PACKAGING
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Rebuilt and Guaranteed for Immediate Delivery
Complete, Ready to Go!

4 Pneumatic Fully Automatic Packaging Lines, Free-Flowing Materials
1 Packomatic Fully-Automatic 8 Pocket Volumetric Filler Line Prices on request.

1 Pneumatic Semi-Automatic Bottom Sealer	$ 700.00
1 Pneumatic Top Sealer Gluer	200.00
1 World-S Semi-Automatic Labeller	750.00
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PACKAGING SALES COMPANY
Manufacturers—Engineers—Sales Agents
Packaging Materials
Materials Handling Equipment
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FOR SALE—Knowlton 16″ Convolute Paper Can Winder Labeling attachment—Langston Roll Paper Slitter and Rewinder, also Tube Cutters. Theo. Adams, 111 W. Washington St., Chicago 2, Illinois.

Manufacturer of folding boxes for food products wishes to engage permanently or on a consulting basis, man familiar with moistureproofing and greaseproofing coatings and their applications to cartonboard and paper. Familiarity with recent developments in plastics and in laminating and coating equipment required. Reply Box 356, Modern Packaging.

WANTED:
DESIGNING ENGINEERS
AND
LAYOUT MEN

Established manufacturer of Packaging Machinery in Middle West needs ENGINEERS to assist in completing designs of post-war machines, and to create machines for new markets.
The job requires creative talent; ingenuity in solving mechanical and packaging problems; previous experience either in layout or design of wrapping or package sealing machines; and a knowledge of tooling for producing production short-cuts.
Permanent opportunities are open for the right men, and a chance to grow with the Company in expanding operations.
Write giving full particulars; previous experience; availability; present salary; and present employer. All answers will be treated in confidence. Box 357, Modern Packaging.

EMBOSSED MACHINE WANTED: 48″ to 60″ wide, to handle web stock. Box No. 358, Modern Packaging.

California Sales Representative: Veteran wishes to represent manufacturers of transparent containers, fancy papers, ribbons, etc. Five years' experience selling this type of merchandise—excellent contacts, references. Reply Box 368, Modern Packaging.

ARE YOU INTERESTED IN RELIABLE AND CAPABLE SALES REPRESENTATION?—Sales organization established almost fifty years is interested in expanding its lines. Located in New York City but selling nationally. Ample capital and sales experience with which to do a job. Box 359, Modern Packaging.

"In the market for one used but in first serviceable condition Paper and Cloth Gumming Machine, 63″ wide. Send proposals to Mr. Ciro A. Martinez, Purchasing Agent, Apartado Postal No. 755, Monterrey, N. L. Mêxico."

15,000 lbs. Marbon B made of natural rubber available. Useful for hot melts, heat seal, moistureproof coatings. Suitably priced for immediate disposal. Reply Box 366, Modern Packaging.

WANTED AUTOMATIC BOTTLE CARTONING MACHINE
For 32 Oz. Boston Round Bottles. Must be available for immediate shipment and in good operating condition. Reply Box 360, Modern Packaging.

PACKAGING AND EQUIPMENT LINES WANTED FOR SOUTH

A long established substantially rated agent and distributor with a sales organization of 15 men trained in specialized selling is open for lines of packages, packaging supplies, packaging and material handling equipment for sale in states of Tennessee, Alabama, Mississippi, Arkansas, Louisiana, West Kentucky, South Missouri, East Oklahoma and East Texas.

Offices in Memphis, Nashville, Shreveport, Birmingham now represent several leading national manufacturers. Can handle additional non-conflicting lines either on commission or jobbing basis.

Write Wurzburg Brothers, 710-24 South Fourth Street, Memphis, Tennessee.

"Wanted: Carton Designer with creative ability, by carton manufacturer in Mid-West, having combined operation." Reply Box 361, Modern Packaging.

UNUSUAL OPPORTUNITY
FOR A
DESIGNER AND SAMPLE MAKER

An important Paper Box Manufacturer is looking for a man or woman to build up and direct a sample department specializing in package designing for the jewelry, perfumery and other fancy box trade. Should be capable of not only directing the department but should be a craftsman in his or her own right, with ability to create layouts or designs and when necessary carry them to the finished stage. Plant located in Metropolitan New York. Address Box 32, Whitestone, N. Y.

INDIA'S
markets require consumer & industrial products. We submit reports, fix agencies, undertake publicity. Great India Publicity Co., 31 Hamam St., Bombay, 1. N.B. Appreciate receiving pub. samples, houseorgans, mail from admen & mfrs. Also packaging materials agency offers. Send full details, samples if possible.

Wanted: Automatic packaging equipment for prepared mixes such as corn muffins and cakes. Only equipment in good condition wanted. Give age of equipment and state on what type of product equipment has been used. Box 362, Modern Packaging.

Unusual opportunity for experienced Production Man for Cellophane Converting Co. in Middle West. Cellophane Printing and Bag making. Experience necessary. Reply Box 363, Modern Packaging.

SALES ENGINEER. Real opportunity for man with packaging machinery selling experience, to work on salary for manufacturer with over 35 years' experience building special machinery. Reply Box 364, Modern Packaging.

Package Engineer. Young aggressive, designer with ten years' packaging experience desires position developing packages that protect and sell. Box 365 Modern Packaging.

Recently discharged naval Lieut. desires sales opportunity—excellent background. Experienced in paperboard, fibre and corrugated shipping containers, folding cartons, aggressive, reliable. Reply Box 367, Modern Packaging.

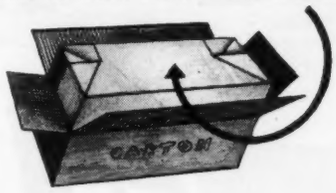
CORROSION IS COSTLY

PROTECT YOUR PRODUCTS WITH SUPERIOR *Moisture-Vapor* BARRIERS

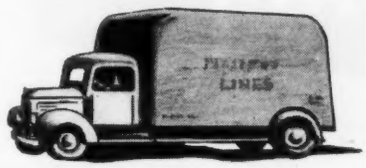
Metal moisture-vaporproof barriers have protected vital war materials under a great variety of climatic conditions. They have definitely proved themselves superior products. Data are available to substantiate this point. All manufacturing operations necessary to produce these products are performed in our plant at Clinton.

A complete range of heat-seal, moisture-vapor barriers are now available for domestic and export packaging.

HEAT SEALED MOISTURE-VAPOR BARRIERS FOR MANY PURPOSES



YOUR PRODUCT IS PROTECTED FOR LONG-TIME SHIPMENT OR STORAGE



ENGINES OR SMALL PARTS ARE PROTECTED FROM CORROSION

Converter
CORPORATION

CLINTON, MASSACHUSETTS

Watch this space for a complete list of barriers and decorative packaging material.

C·C

JAY CEE

SILICA GEL

PROTECTS TELETYPE* EQUIPMENT FROM MOISTURE DAMAGE • • •

Yes . . . this Teletype printer arrived "perfectly dry" . . . thanks to Jay Cee Silica Gel —which is protecting innumerable over-seas shipments of delicate machines, instruments and weapons from moisture damage.

A few small cotton bags containing this ideal drying agent are enclosed in the box or carton with the equipment. The phenomenal power of Jay Cee Silica Gel to absorb the atmospheric moisture within the container prevents rust or corrosion in transit. Jay Cee Silica Gel is also used in packages of foods, fabrics, chemicals, and other products. Moreover, it has wide application in the air conditioning, refrigeration, and chemical industries. Jay Cee Silica Gel is clear white; passes a rigid section test, meets exacting Government specifications; is strictly a quality product.

JOBBERS WANTED—A few excellent Jay Cee Silica Gel sales territories are still open to jobbers. Write for details.

* Registered trade-mark

JOLIET CHEMICALS, LTD.
INDUSTRY AVENUE
JOLIET, ILLINOIS

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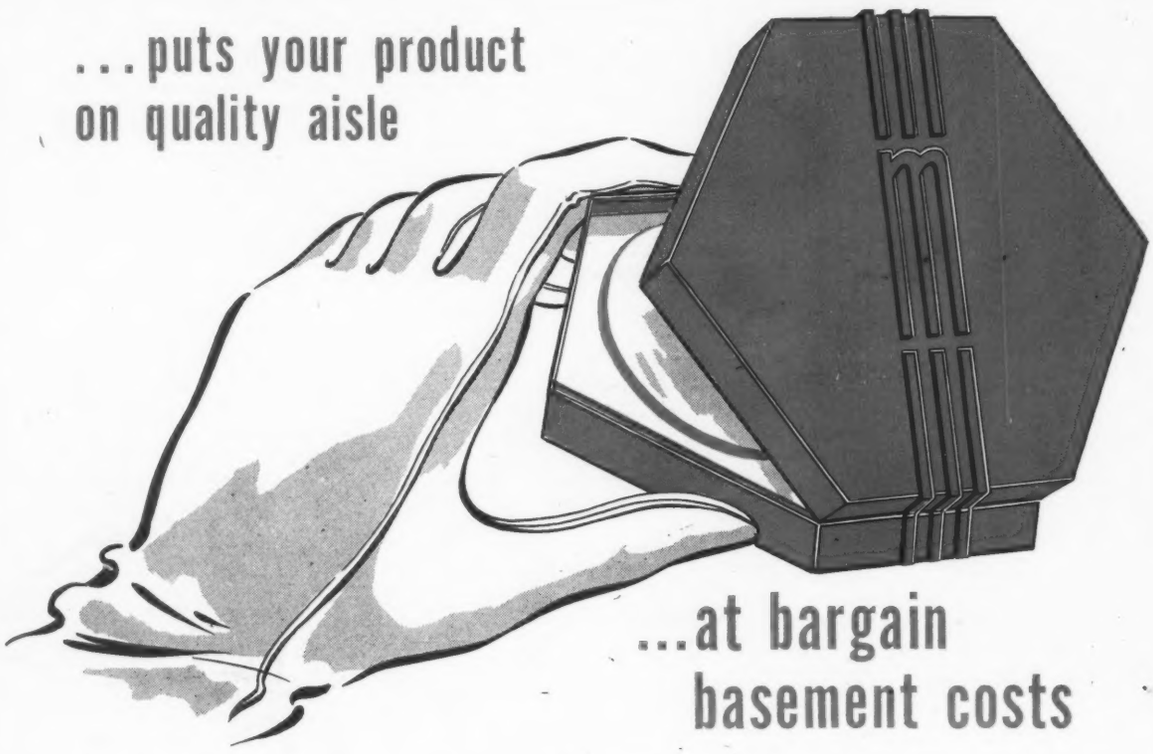

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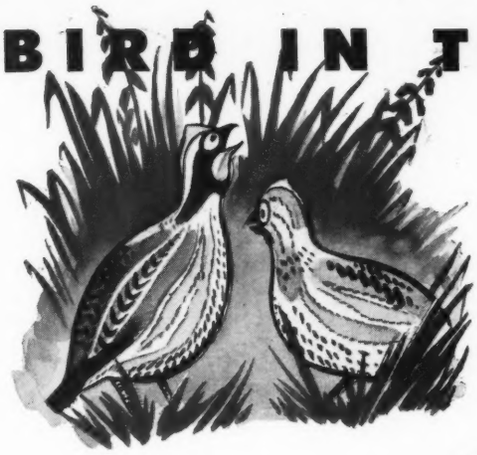

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